SURFACE MOUNT

SPDT RF Switch

JSW2-33DR-75+

75Ω 5 to 3000 MHz Reflective RF Switch with Internal Driver
Single Supply Voltage, + 2.3 V to +4.8 V, High Power, 3 W

THE BIG DEAL

- High Isolation, 42 dB Typ. at 1 GHz
- Low Insertion Loss, 0.38 dB Typ. at 1 GHz
- High IP3, +56 dBm Typ. at 1 GHz
- Low Current Consumption, 37 µA Typ.
- High Power, P0.1dB 3 W

Generic photo used for illustration purposes only

CASE STYLE: MT1818

+RoHS Compliant
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- CATV Systems
- SATCOM System
- Automated Test Stations

PRODUCT OVERVIEW

The JSW2-33DR-75+ is a high-power reflective SPDT RF switch, with reflective short on output ports in the OFF state. Made using a Silicon-on-Insulator process, it provides very high IP3 (+55 dBm typ.). This switch also has a built-in CMOS driver and negative voltage generator, all packaged in a tiny 2 x 2 mm package, enabling it to operate over wideband and fit into tight spaces.

KEY FEATURES

Features	Advantages
Wideband Operation, 5 to 3000 MHz	Enables a single component to be used in a vast array of applications from VHF up to 3000 MHz.
High IIP3, +55 dBm Typ.	Results in little or negligible inter-modulation generation, meeting requirements for digital communication signals.
Low Insertion Loss, 0.38 dB at 1 GHz & High Input Power, 3 W	Low insertion loss and high power capability enables a single switch to be used for a variety of applications, saving inventory.
Built-In Negative Voltage Generator	Operates with single positive supply voltage; no need for DC blocking capacitors, unless external DC is present at the RF ports.
Built-In CMOS Driver	No need for external driver, saving PCB space and cost.
Tiny MCLP Package, 2 x 2 mm, 12-Lead	Provides low inductance, repeatable transitions, and excellent thermal contact to PCB.

REV. D
ECO-026600
JSW2-33DR-75+
MCL NY
260429

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RF ELECTRICAL SPECIFICATIONS[1], T_{AMB} = +25°C, V_{DD} = +2.3 V TO +4.8 V

Parameter	Condition (MHz)	Min.	Typ.	Max.	Units
Frequency Range		5		3000	MHz
Insertion Loss[2] (ON STATE)	5-1000	–	0.38	0.48	dB
	1000-1500	–	0.48	0.58	
	1500-2000	–	0.54	0.64	
	2000-3000	–	0.53	0.64	
Isolation Between Common Port and RF1 / RF2 Ports	5-1000	40	42	–	dB
	1000-1500	35	38	–	
	1500-2000	32	35	–	
	2000-3000	28	31	–	
Isolation Between RF1 and RF2 Ports[3]	5-1000	40	45	–	dB
	1000-1500	35	41	–	
	1500-2000	32	37	–	
	2000-3000	28	32	–	
Return Loss (ON STATE), All Ports	5-1000	–	19	–	dB
	1000-1500	–	16	–	
	1500-2000	–	16	–	
	2000-3000	–	17	–	
Input IP3 (V_{DD} = +3 V)	5-1000	–	+56	–	dBm
	1000-1500	–	+62	–	
	1500-2000	–	+63	–	
	2000-3000	–	+63	–	
0.1 dB Input Compression[4]	5-3000	–	+35.0	–	dBm

1. Tested on Mini-Circuit's test board TB-723-F+ (see Characterization Test Circuit, Fig.1).
2. Insertion loss values include test board loss.
3. Enable voltage "HI", either RF1 or RF2 are ON.
4. Do not exceed RF input power as shown in Absolute Maximum Rating table.

DC OPERATING ELECTRICAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Units
V_{DD}, Supply Voltage	+2.3	–	+4.8	V
Supply Current	–	37	–	µA
Control Enable Voltage Low	0	–	+0.4	V
Control Enable Voltage High	+1.65	–	V_{DD}	V
Control Current	–	1	–	µA
Shutdown Mode - Supply Current	–	7	–	µA

SWITCHING SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Units
Rise/Fall Time (10 to 90% or 90 to 10% RF)	–	0.5 (Rise Time) 0.7 (Fall Time)	–	µSec
Switching Time, 50% CTRL to 90/10% RF	–	1.9 (ON Time) 1.1 (OFF Time)	–	µSec
Video Feed-Through, (Control 0 to +1.65 V, Freq. = 10 KHz)	–	3.0	–	mV_{P-P}

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Single Supply Voltage, + 2.3 V to +4.8 V, High Power, 3 W

ABSOLUTE MAXIMUM RATINGS[5]

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +125°C
V_{DD}, Supply Voltage	+5.0 V
Voltage Control	-0.2 V min. V_{DD} max.
RF Input Power[6]	5 W

5. Operation of this device above any of these conditions may cause permanent damage.
6. Derate linearly to 2.5 W at +85°C.

TRUTH TABLE

(State of control and enable voltage selects the desired switch state)

State of:		RF Common to	
Control Voltage	Enable Voltage	RF1	RF2
High	High	ON	OFF
Low	High	OFF	ON
Low/High	Low	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

CHARACTERIZATION TEST CIRCUIT

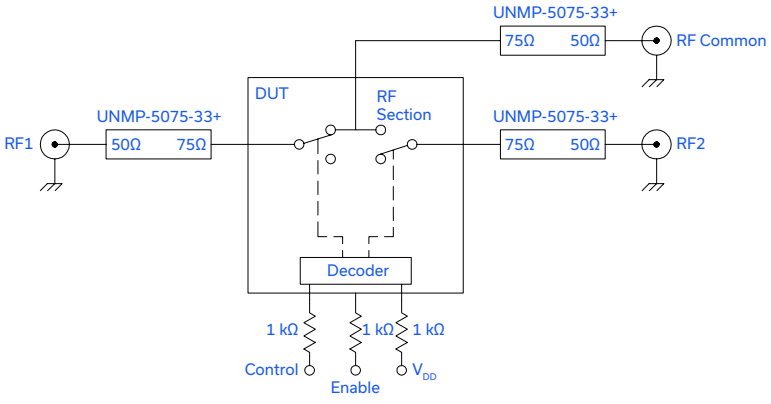

Figure 1: Block Diagram of Test Circuit Used for Characterization (DUT soldered on Mini-Circuit's TB-723-F+)

Test Equipment:

For Insertion Loss, Isolation, Return Loss:
Agilent's N5230A Network Analyzer , E3631A power supply.
Mini-Circuits Matching Pad UNMP-5075-33+

For Switching Time and Video Feed Through:
Agilent's AG54832B HP81110A pulse generator, HPE3631A Network Analyzer , E3631A power supply.
Agilent's N90A Spectrum Analyzer , E8257D Generator U200A

For Compression:
R&S Network Analyzer ZVA24, E3631A power supply

Conditions:
V_{DD} = +2.3 V and +4.8 V, Control = 0 and +1.65 V
For Insertion Loss, Isolation and Return Loss: P_{IN} = 0 dBm
For Input IP3: P_{IN} = +10 dBm/tone
For Switching Time: RF Frequency: DC at 0 dBm, Control Frequency: 500 KHz and 0 and +1.65 V

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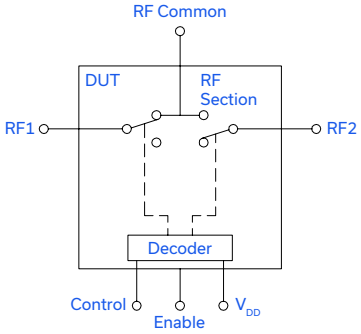
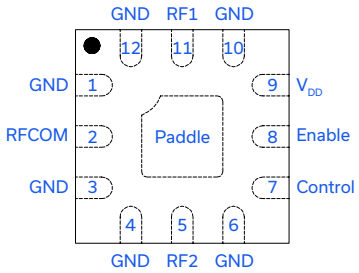
SIMPLIFIED SCHEMATIC AND PAD DESCRIPTION





Function	Pad Number	Description
RF COM	2	RF Common/SUM Port, (see Fig. 2)
RF1	11	RF Out #1/In Port #1, (see Fig. 2)
RF2	5	RF Out #1/In Port #2, (see Fig. 2)
Control	7	CMOS Control IN
V_{DD}	9	Supply Voltage
Enable	8	Shutdown mode enabled by connecting to logic low
GND	1,3,4,6,10,12	Ground

RECOMMENDED APPLICATION CIRCUIT

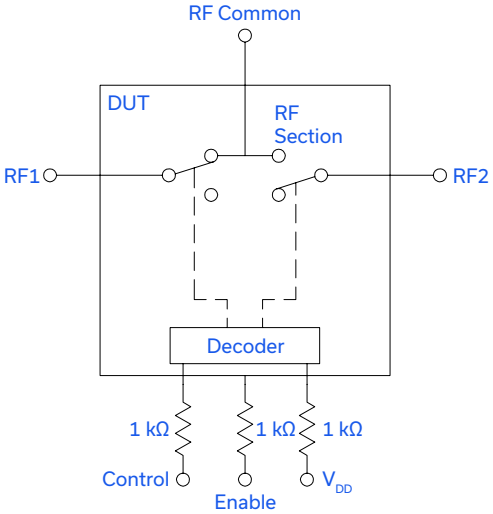
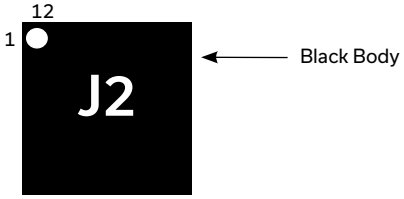


Figure 2. Evaluation board includes case, connectors and components soldered to PCB.

PRODUCT MARKING



Marking may contain other features or characters for internal lot control.

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ADDITIONAL DETAILED TECHNICAL INFORMATION IS AVAILABLE ON OUR DASHBOARD. TO ACCESS CLICK HERE

Performance Data	Data Table Swept Graphs
Case Style	MT1818 Plastic package, Lead Finish: NiPdAu
Tape & Reel **Standard Quantities Available on Reel**	F108 7" Reels with 20, 50, 100, 200, 500, 1000, 2000, or 3000 devices
Suggested Layout for PCB Design	PL-415
Evaluation Board	TB-723-F+
Environmental Ratings	ENV75

ESD RATING

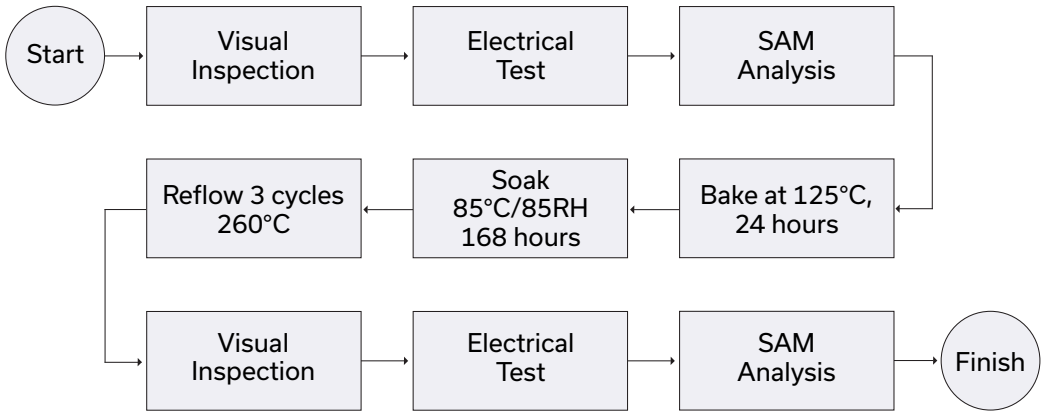
Human Body Model (HBM): Class 1B (500 to < 1000 V) in accordance with JESD22-A114

Machine Model (MM): Class A (Pass 100 V) in accordance with JESD22-A115

MSL RATING

Moisture Sensitivity: MSL1 in accordance with IPC/JEDEC J-STD-020D

MSL TEST FLOW CHART



NOTES

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

Typical Performance Data

RF FREQ (MHz)	INSERTION LOSS (dB)					
	VDD=+2.3V		VDD=+3V		VDD=+4.8V	
	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2
10.0	0.19	0.18	0.18	0.16	0.18	0.17
20.0	0.18	0.17	0.18	0.17	0.17	0.17
30.0	0.18	0.18	0.18	0.18	0.18	0.18
40.0	0.18	0.18	0.18	0.18	0.18	0.18
50.0	0.18	0.18	0.18	0.18	0.18	0.19
60.0	0.18	0.19	0.19	0.19	0.19	0.19
70.0	0.19	0.19	0.19	0.19	0.19	0.19
80.0	0.19	0.19	0.19	0.19	0.19	0.19
90.0	0.19	0.19	0.19	0.19	0.19	0.19
100.0	0.19	0.19	0.19	0.19	0.19	0.19
200.0	0.21	0.21	0.21	0.21	0.21	0.21
300.0	0.22	0.22	0.22	0.22	0.22	0.22
400.0	0.24	0.23	0.23	0.23	0.23	0.23
500.0	0.25	0.25	0.25	0.25	0.25	0.25
600.0	0.27	0.26	0.27	0.26	0.27	0.26
700.0	0.29	0.28	0.29	0.28	0.29	0.28
800.0	0.31	0.30	0.30	0.30	0.30	0.30
900.0	0.33	0.32	0.32	0.32	0.32	0.32
1000.0	0.35	0.34	0.34	0.34	0.34	0.34
1100.0	0.37	0.36	0.37	0.36	0.36	0.36
1200.0	0.39	0.39	0.38	0.38	0.38	0.38
1300.0	0.40	0.41	0.40	0.41	0.40	0.41
1400.0	0.42	0.43	0.42	0.43	0.42	0.43
1500.0	0.43	0.45	0.43	0.45	0.43	0.45
1600.0	0.45	0.46	0.44	0.46	0.44	0.46
1700.0	0.46	0.47	0.46	0.47	0.46	0.47
1800.0	0.47	0.48	0.46	0.48	0.46	0.48
1900.0	0.47	0.49	0.47	0.48	0.47	0.48
2000.0	0.47	0.48	0.47	0.48	0.47	0.48
2100.0	0.47	0.48	0.47	0.48	0.47	0.48
2200.0	0.47	0.47	0.46	0.47	0.46	0.47
2300.0	0.46	0.47	0.46	0.46	0.46	0.46
2400.0	0.46	0.46	0.46	0.46	0.46	0.46
2500.0	0.46	0.46	0.45	0.45	0.45	0.45
2600.0	0.45	0.45	0.45	0.45	0.45	0.45
2700.0	0.46	0.45	0.46	0.45	0.45	0.45
2800.0	0.46	0.46	0.46	0.46	0.46	0.46
2900.0	0.47	0.47	0.46	0.47	0.46	0.47
3000.0	0.47	0.47	0.47	0.47	0.47	0.47

RF FREQ (MHz)	ISOLATION (dB) (ENABLE-HIGH*)											
	VDD=+2.3V		VDD=+3V		VDD=+4.8V		VDD=+2.3V		VDD=+3V		VDD=+4.8V	
	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2	RF COM-RF1	RF COM-RF2	RF1-RF2 Control LOW*	RF1-RF2 Control HIGH*	RF1-RF2 Control LOW*	RF1-RF2 Control HIGH*	RF1-RF2 Control LOW*	RF1-RF2 Control HIGH*
10.0	62.51	62.16	59.11	58.59	63.05	59.77	59.09	59.62	58.41	58.58	59.53	56.98
20.0	90.77	70.02	74.33	73.31	74.10	72.92	77.39	71.70	73.58	77.75	78.07	78.01
30.0	73.03	74.44	73.72	71.45	74.42	71.57	74.98	74.30	74.84	74.32	76.33	74.46
40.0	70.41	71.57	71.14	70.10	71.85	70.98	75.52	73.39	71.98	71.90	74.14	76.98
50.0	64.07	60.92	76.43	63.91	61.24	66.62	61.24	61.89	63.02	67.88	66.60	65.16
60.0	62.70	65.15	63.14	76.76	66.53	62.40	71.61	70.76	72.06	71.96	70.01	69.26
70.0	64.73	65.24	65.11	65.55	65.34	64.60	70.00	69.85	70.31	70.03	68.61	69.05
80.0	63.88	63.92	64.10	64.68	64.07	64.46	67.61	68.68	69.23	69.24	68.53	68.47
90.0	62.58	62.52	62.98	64.05	63.57	62.93	66.74	67.27	68.42	67.91	67.13	66.92
100.0	61.69	62.08	62.14	62.82	62.53	62.48	65.87	66.61	66.87	67.38	67.11	65.83
200.0	56.11	56.20	56.22	56.38	56.26	56.11	60.31	60.48	60.82	60.68	60.76	60.51
300.0	52.73	52.70	52.71	52.82	52.66	52.78	56.78	56.71	57.45	56.85	57.17	56.91
400.0	49.99	50.10	50.21	50.16	50.05	50.19	54.50	54.29	54.62	54.37	54.51	54.43
500.0	48.03	48.24	48.18	48.24	48.20	48.25	52.41	52.19	52.79	52.44	52.64	52.31
600.0	46.38	46.55	46.55	46.67	46.55	46.65	50.82	50.53	51.11	50.77	51.15	50.66
700.0	45.06	45.28	45.16	45.31	45.16	45.30	49.56	49.12	49.62	49.18	49.58	49.27
800.0	43.81	44.08	43.96	44.18	43.97	44.12	48.22	47.75	48.41	48.03	48.42	48.05
900.0	42.76	42.99	42.90	43.12	42.90	43.11	47.20	46.68	47.30	46.83	47.27	46.87
1000.0	41.83	42.09	41.89	42.16	41.91	42.17	46.13	45.69	46.34	45.88	46.33	45.87
1100.0	40.91	41.20	41.00	41.29	40.97	41.31	45.26	44.80	45.37	44.91	45.34	44.91
1200.0	40.10	40.41	40.20	40.52	40.21	40.51	44.46	43.95	44.62	44.09	44.61	44.07
1300.0	39.33	39.67	39.44	39.78	39.46	39.77	43.61	43.11	43.78	43.22	43.81	43.23
1400.0	38.62	38.97	38.71	39.08	38.68	39.08	42.94	42.33	43.07	42.48	43.08	42.50
1500.0	37.96	38.31	38.05	38.40	38.06	38.41	42.22	41.66	42.35	41.75	42.40	41.74
1600.0	37.33	37.68	37.43	37.76	37.43	37.77	41.58	40.92	41.72	41.05	41.68	41.12
1700.0	36.74	37.09	36.83	37.16	36.83	37.16	40.94	40.28	41.09	40.40	41.08	40.42
1800.0	36.17	36.51	36.26	36.60	36.25	36.59	40.33	39.65	40.47	39.76	40.47	39.76
1900.0	35.67	35.99	35.77	36.07	35.73	36.07	39.69	39.03	39.85	39.13	39.83	39.13
2000.0	35.16	35.44	35.22	35.50	35.21	35.53	39.19	38.40	39.28	38.52	39.28	38.49
2100.0	34.65	34.97	34.74	35.06	34.75	35.07	38.56	37.78	38.64	37.86	38.64	37.85
2200.0	34.15	34.46	34.21	34.56	34.21	34.56	38.03	37.22	38.14	37.29	38.15	37.31
2300.0	33.77	34.03	33.83	34.12	33.84	34.13	37.48	36.69	37.57	36.73	37.58	36.74
2400.0	33.27	33.61	33.83	33.69	33.35	33.69	36.91	36.04	37.02	36.12	37.01	36.12
2500.0	32.85	33.17	33.83	33.24	32.91	33.24	36.44	35.51	36.56	35.59	36.54	35.58
2600.0	32.43	32.78	33.83	32.85	32.50	32.86	35.90	34.99	35.95	35.04	35.98	35.05
2700.0	32.01	32.41	33.83	32.47	32.06	32.48	35.41	34.41	35.50	34.47	35.49	34.47
2800.0	31.60	32.10	33.83	32.18	31.65	32.18	34.88	33.83	34.96	33.88	34.96	33.88
2900.0	31.20	31.76	33.83	31.84	31.27	31.83	34.40	33.31	34.48	33.35	34.48	33.35
3000.0	30.73	31.41	33.83	31.47	30.79	31.48	33.90	32.73	33.98	32.77	33.97	32.78

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	VSWR (:1)-ON STATE (ENABLE-HIGH*)											
	VDD=+2.3V				VDD=+3V				VDD=+4.8V			
	RF COM		RF1	RF2	RF COM		RF1	RF2	RF COM		RF1	RF2
	Control LOW*	Control HIGH*	Control HIGH*	Control LOW*	Control LOW*	Control HIGH*	Control HIGH*	Control LOW*	Control LOW*	Control HIGH*	Control HIGH*	Control LOW*
10.0	1.02	1.03	1.02	1.02	1.02	1.03	1.03	1.02	1.02	1.02	1.03	1.02
20.0	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
30.0	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
40.0	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
50.0	1.03	1.02	1.02	1.02	1.03	1.03	1.02	1.02	1.03	1.02	1.02	1.02
60.0	1.03	1.03	1.03	1.03	1.03	1.02	1.03	1.03	1.03	1.03	1.03	1.03
70.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
80.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
90.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
100.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
200.0	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
300.0	1.08	1.07	1.07	1.07	1.08	1.07	1.07	1.07	1.08	1.07	1.07	1.07
400.0	1.10	1.10	1.10	1.09	1.10	1.10	1.10	1.09	1.10	1.10	1.10	1.09
500.0	1.13	1.12	1.12	1.11	1.13	1.12	1.12	1.11	1.13	1.12	1.12	1.11
600.0	1.16	1.15	1.15	1.14	1.16	1.15	1.15	1.14	1.16	1.15	1.15	1.14
700.0	1.18	1.18	1.18	1.17	1.18	1.18	1.18	1.17	1.18	1.18	1.18	1.17
800.0	1.21	1.21	1.20	1.20	1.21	1.21	1.20	1.20	1.21	1.21	1.20	1.20
900.0	1.23	1.23	1.23	1.22	1.23	1.23	1.23	1.22	1.23	1.23	1.23	1.22
1000.0	1.25	1.26	1.25	1.24	1.25	1.26	1.25	1.24	1.25	1.26	1.25	1.24
1100.0	1.27	1.28	1.27	1.26	1.27	1.28	1.27	1.26	1.27	1.28	1.27	1.26
1200.0	1.29	1.31	1.28	1.29	1.29	1.31	1.28	1.29	1.29	1.31	1.28	1.29
1300.0	1.30	1.32	1.29	1.30	1.30	1.32	1.29	1.30	1.30	1.32	1.29	1.30
1400.0	1.31	1.34	1.30	1.32	1.31	1.34	1.30	1.32	1.31	1.34	1.30	1.32
1500.0	1.31	1.34	1.31	1.32	1.31	1.34	1.31	1.32	1.31	1.34	1.31	1.32
1600.0	1.31	1.34	1.31	1.32	1.31	1.34	1.31	1.32	1.31	1.34	1.31	1.32
1700.0	1.31	1.33	1.30	1.32	1.31	1.33	1.30	1.32	1.31	1.33	1.30	1.32
1800.0	1.30	1.32	1.29	1.31	1.30	1.32	1.29	1.31	1.30	1.32	1.29	1.31
1900.0	1.28	1.31	1.28	1.29	1.28	1.31	1.28	1.29	1.28	1.31	1.28	1.29
2000.0	1.26	1.28	1.26	1.27	1.26	1.28	1.26	1.27	1.26	1.28	1.26	1.27
2100.0	1.24	1.26	1.23	1.24	1.24	1.26	1.23	1.24	1.24	1.26	1.23	1.24
2200.0	1.21	1.22	1.21	1.21	1.21	1.22	1.21	1.21	1.21	1.22	1.21	1.21
2300.0	1.19	1.19	1.18	1.17	1.19	1.19	1.18	1.17	1.19	1.19	1.18	1.17
2400.0	1.16	1.15	1.15	1.14	1.16	1.15	1.15	1.14	1.16	1.15	1.15	1.14
2500.0	1.13	1.12	1.13	1.10	1.13	1.12	1.13	1.10	1.13	1.12	1.13	1.10
2600.0	1.10	1.09	1.10	1.07	1.10	1.09	1.10	1.07	1.10	1.09	1.10	1.07
2700.0	1.07	1.06	1.08	1.03	1.07	1.06	1.08	1.03	1.07	1.06	1.08	1.03
2800.0	1.05	1.04	1.06	1.02	1.05	1.04	1.06	1.02	1.05	1.04	1.06	1.02
2900.0	1.03	1.03	1.04	1.03	1.03	1.03	1.04	1.03	1.03	1.03	1.04	1.03
3000.0	1.02	1.04	1.02	1.05	1.02	1.04	1.03	1.05	1.02	1.04	1.03	1.05

RF FREQ (MHz)	VSWR (:1)- OFF STATE (ENABLE-HIGH*)					
	VDD=+2.3V		VDD=+3V		VDD=+4.8V	
	RF1	RF2	RF1	RF2	RF1	RF2
	Control LOW*	Control HIGH*	Control LOW*	Control HIGH*	Control LOW*	Control HIGH*
10.0	5.67	5.67	5.67	5.76	5.58	5.73
20.0	5.70	5.64	5.70	5.74	5.60	5.74
30.0	5.70	5.63	5.70	5.73	5.59	5.73
40.0	5.69	5.62	5.69	5.72	5.59	5.73
50.0	5.70	5.61	5.70	5.71	5.60	5.73
60.0	5.69	5.61	5.69	5.71	5.59	5.72
70.0	5.68	5.61	5.68	5.71	5.58	5.71
80.0	5.68	5.60	5.68	5.70	5.58	5.70
90.0	5.67	5.59	5.67	5.69	5.57	5.70
100.0	5.66	5.59	5.66	5.69	5.56	5.69
200.0	5.60	5.54	5.60	5.64	5.50	5.64
300.0	5.54	5.47	5.54	5.57	5.44	5.57
400.0	5.47	5.42	5.47	5.51	5.38	5.52
500.0	5.40	5.36	5.40	5.45	5.31	5.45
600.0	5.32	5.30	5.32	5.39	5.23	5.39
700.0	5.24	5.23	5.24	5.32	5.16	5.32
800.0	5.16	5.16	5.16	5.25	5.08	5.25
900.0	5.09	5.09	5.09	5.17	5.01	5.18
1000.0	5.02	5.02	5.02	5.10	4.94	5.10
1100.0	4.96	4.96	4.96	5.04	4.88	5.04
1200.0	4.90	4.89	4.90	4.97	4.82	4.97
1300.0	4.84	4.82	4.84	4.90	4.76	4.90
1400.0	4.78	4.76	4.78	4.84	4.70	4.84
1500.0	4.73	4.70	4.73	4.77	4.65	4.78
1600.0	4.70	4.65	4.70	4.72	4.62	4.73
1700.0	4.67	4.59	4.67	4.67	4.59	4.67
1800.0	4.65	4.55	4.65	4.63	4.57	4.63
1900.0	4.62	4.51	4.62	4.59	4.55	4.59
2000.0	4.63	4.49	4.63	4.57	4.55	4.57
2100.0	4.62	4.48	4.62	4.56	4.55	4.56
2200.0	4.63	4.48	4.63	4.56	4.56	4.56
2300.0	4.64	4.51	4.64	4.58	4.56	4.59
2400.0	4.66	4.53	4.66	4.61	4.58	4.61
2500.0	4.68	4.58	4.68	4.66	4.60	4.66
2600.0	4.71	4.63	4.71	4.71	4.63	4.71
2700.0	4.75	4.69	4.75	4.77	4.67	4.77
2800.0	4.80	4.76	4.80	4.84	4.72	4.84
2900.0	4.86	4.83	4.86	4.91	4.78	4.91
3000.0	4.91	4.91	4.91	4.99	4.83	5.00

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	INPUT IP3 (dBm)	
	VDD=+3V	
	RF COM-RF1	RF COM-RF2
10.0	56.33	56.63
50.0	60.08	59.79
100.0	61.79	61.16
200.0	63.24	63.12
300.0	61.57	60.60
400.0	63.08	62.28
500.0	67.05	67.90
600.0	62.28	62.59
700.0	65.27	65.45
800.0	62.01	62.30
900.0	62.65	62.58
1000.0	67.76	66.95
1200.0	62.06	62.89
1400.0	64.26	66.77
1600.0	64.66	63.98
1800.0	65.54	67.66
2000.0	64.02	64.13
2200.0	63.16	63.48
2400.0	63.49	65.64
2600.0	65.25	65.25
2800.0	65.96	66.00
3000.0	63.76	63.17

RF FREQ (MHz)	COMPRESSION (dB) @ FIXED POWER FOR PIN=34.5dBm	
	VDD=+3V	
	RF COM-RF1	RF COM-RF2
200.0	0.00	0.00
300.0	0.00	0.00
400.0	0.00	0.00
500.0	0.00	0.01
600.0	-0.02	-0.01
700.0	-0.01	-0.01
800.0	-0.02	-0.02
900.0	-0.01	-0.02
1000.0	-0.03	-0.02
1200.0	-0.02	-0.02
1400.0	-0.05	-0.03
1600.0	-0.05	-0.05
1800.0	-0.06	-0.06
2000.0	-0.08	-0.06
2200.0	-0.08	-0.07
2400.0	-0.08	-0.07
2600.0	0.02	0.00
2800.0	0.02	0.00
3000.0	0.02	0.02

Typical Performance Data

RF FREQ (MHz)	INSERTION LOSS (dB) @ VDD=+3V OVER TEMPERTURE (ENABLE-HIGH*)					
	RF COM-RF1			RF COM-RF2		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	0.14	0.18	0.22	0.12	0.16	0.21
20.0	0.13	0.18	0.21	0.13	0.17	0.21
30.0	0.14	0.18	0.22	0.14	0.18	0.22
40.0	0.14	0.18	0.22	0.14	0.18	0.22
50.0	0.14	0.18	0.22	0.15	0.18	0.22
60.0	0.15	0.19	0.22	0.15	0.19	0.22
70.0	0.15	0.19	0.22	0.15	0.19	0.22
80.0	0.15	0.19	0.22	0.15	0.19	0.23
90.0	0.15	0.19	0.23	0.15	0.19	0.23
100.0	0.15	0.19	0.23	0.16	0.19	0.23
200.0	0.16	0.21	0.25	0.16	0.21	0.25
300.0	0.17	0.22	0.27	0.17	0.22	0.27
400.0	0.18	0.23	0.29	0.17	0.23	0.29
500.0	0.19	0.25	0.31	0.18	0.25	0.31
600.0	0.20	0.27	0.33	0.19	0.26	0.33
700.0	0.21	0.29	0.35	0.21	0.28	0.35
800.0	0.22	0.30	0.37	0.22	0.30	0.37
900.0	0.24	0.32	0.39	0.23	0.32	0.39
1000.0	0.25	0.34	0.41	0.24	0.34	0.41
1100.0	0.27	0.37	0.43	0.27	0.36	0.43
1200.0	0.28	0.38	0.45	0.29	0.38	0.45
1300.0	0.30	0.40	0.46	0.31	0.41	0.46
1400.0	0.32	0.42	0.47	0.34	0.43	0.49
1500.0	0.32	0.43	0.49	0.36	0.45	0.50
1600.0	0.33	0.44	0.51	0.37	0.46	0.52
1700.0	0.33	0.46	0.53	0.36	0.47	0.54
1800.0	0.33	0.46	0.54	0.36	0.48	0.55
1900.0	0.32	0.47	0.57	0.36	0.48	0.57
2000.0	0.32	0.47	0.58	0.34	0.48	0.58
2100.0	0.31	0.47	0.59	0.32	0.48	0.59
2200.0	0.29	0.46	0.60	0.31	0.47	0.61
2300.0	0.29	0.46	0.61	0.29	0.46	0.61
2400.0	0.28	0.46	0.61	0.28	0.46	0.62
2500.0	0.28	0.45	0.61	0.27	0.45	0.63
2600.0	0.27	0.45	0.61	0.27	0.45	0.63
2700.0	0.27	0.46	0.61	0.28	0.45	0.63
2800.0	0.28	0.46	0.61	0.28	0.46	0.63
2900.0	0.27	0.46	0.61	0.28	0.47	0.63
3000.0	0.28	0.47	0.62	0.28	0.47	0.64

RF FREQ (MHz)	ISOLATION (dB) @ VDD=+3V OVER TEMPERTURE (ENABLE-HIGH*)											
	RF COM-RF1			RF COM-RF2			RF1-RF2 Control LOW*			RF1-RF2 Control HIGH*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	58.37	59.11	59.49	58.59	62.45	61.73	57.92	58.41	56.98	58.58	58.12	59.15
20.0	77.35	74.33	84.18	73.31	74.26	71.77	76.96	73.58	78.01	77.75	88.31	72.91
30.0	89.35	73.72	72.92	71.45	76.52	70.27	73.93	74.84	74.46	74.32	78.42	73.86
40.0	74.04	71.14	69.76	70.10	71.71	69.23	77.28	71.98	76.98	71.90	79.28	71.63
50.0	61.59	76.43	66.77	63.91	68.02	60.48	65.85	63.02	65.16	67.88	65.41	64.42
60.0	68.01	63.14	61.06	76.76	62.98	62.32	72.11	72.06	69.26	71.96	72.23	69.05
70.0	67.08	65.11	64.19	65.55	67.18	63.93	72.78	70.31	69.05	70.03	72.39	67.85
80.0	66.12	64.10	62.21	64.68	65.85	62.49	72.33	69.23	68.47	69.24	71.24	66.35
90.0	64.89	62.98	61.38	64.05	64.94	61.48	70.26	68.42	66.92	67.91	70.75	65.58
100.0	63.98	62.14	60.43	62.82	64.11	60.44	70.14	66.87	65.83	67.38	70.25	64.89
200.0	57.74	56.22	55.08	56.38	57.75	54.98	63.63	60.82	60.51	60.68	63.15	58.67
300.0	54.18	52.71	51.21	52.82	54.14	51.48	60.18	57.45	56.91	56.85	59.88	54.88
400.0	51.49	50.21	48.85	50.16	51.66	48.97	57.33	54.62	54.43	54.37	56.98	52.47
500.0	49.59	48.18	46.92	48.24	49.66	47.02	55.08	52.79	52.31	52.44	54.74	50.36
600.0	47.84	46.55	45.35	46.67	48.09	45.40	53.43	51.11	50.66	50.77	52.93	48.86
700.0	46.46	45.16	43.95	45.31	46.66	44.09	51.86	49.62	49.27	49.18	51.46	47.46
800.0	45.26	43.96	42.79	44.18	45.49	42.93	50.65	48.41	48.05	48.03	50.12	46.23
900.0	44.17	42.90	41.73	43.12	44.47	41.89	49.48	47.30	46.87	46.83	48.88	45.22
1000.0	43.09	41.89	40.80	42.16	43.44	40.89	48.45	46.34	45.87	45.88	47.78	44.19
1100.0	42.16	41.00	39.96	41.29	42.55	40.06	47.45	45.37	44.91	44.91	46.77	43.33
1200.0	41.34	40.20	39.18	40.52	41.72	39.29	46.54	44.62	44.07	44.09	45.80	42.46
1300.0	40.49	39.44	38.45	39.78	40.97	38.58	45.67	43.78	43.23	43.22	44.91	41.66
1400.0	39.77	38.71	37.77	39.08	40.18	37.87	44.82	43.07	42.50	42.48	44.11	40.95
1500.0	39.10	38.05	37.16	38.40	39.46	37.25	44.08	42.35	41.74	41.75	43.29	40.29
1600.0	38.41	37.43	36.54	37.76	38.77	36.63	43.28	41.72	41.12	41.05	42.51	39.60
1700.0	37.81	36.83	35.96	37.16	38.05	36.09	42.54	41.09	40.42	40.40	41.70	38.98
1800.0	37.24	36.26	35.40	36.60	37.43	35.55	41.80	40.47	39.76	39.76	40.97	38.39
1900.0	36.69	35.77	34.89	36.07	36.78	35.05	40.98	39.85	39.13	39.13	40.21	37.83
2000.0	36.20	35.22	34.35	35.50	36.18	34.59	40.30	39.28	38.49	38.52	39.53	37.26
2100.0	35.73	34.74	33.89	35.06	35.67	34.17	39.51	38.64	37.85	37.86	38.79	36.72
2200.0	35.22	34.21	33.37	34.56	35.08	33.72	38.84	38.14	37.31	37.29	38.07	36.21
2300.0	34.82	33.83	33.37	34.12	34.60	33.31	38.29	37.57	36.74	36.73	37.47	35.76
2400.0	34.32	33.36	33.37	33.69	34.20	32.90	37.58	37.02	36.12	36.12	36.76	35.29
2500.0	33.83	32.91	33.37	33.24	33.84	32.50	37.10	36.56	35.58	35.59	36.12	34.81
2600.0	33.38	32.50	33.37	32.85	33.51	32.12	36.53	35.95	35.05	35.04	35.44	34.32
2700.0	32.87	32.06	33.37	32.47	33.19	31.73	36.04	35.50	34.47	34.47	34.83	33.87
2800.0	32.34	31.65	33.37	32.18	32.95	31.38	35.50	34.96	33.88	33.88	34.15	33.33
2900.0	31.79	31.26	33.37	31.84	32.62	30.97	35.01	34.48	33.35	33.35	33.59	32.86
3000.0	31.22	30.79	30.35	31.47	32.29	30.58	34.57	33.98	32.78	32.77	33.04	32.37

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	VSWR (:1) @ VDD=+3V OVER TEMPERTURE (ON STATE, ENABLE-HIGH*)											
	RF COM						RF1			RF2		
	Control HIGH*			Control LOW*			Control HIGH*			Control LOW*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	1.02	1.02	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.03	1.02	1.03
20.0	1.03	1.02	1.03	1.02	1.02	1.03	1.02	1.02	1.03	1.02	1.02	1.03
30.0	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03
40.0	1.04	1.02	1.03	1.04	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03
50.0	1.04	1.03	1.03	1.04	1.03	1.03	1.03	1.02	1.03	1.03	1.02	1.03
60.0	1.04	1.03	1.03	1.04	1.02	1.03	1.03	1.03	1.03	1.03	1.03	1.03
70.0	1.04	1.03	1.02	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
80.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
90.0	1.03	1.03	1.03	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.03
100.0	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04
200.0	1.03	1.05	1.07	1.04	1.05	1.06	1.03	1.05	1.07	1.04	1.05	1.06
300.0	1.05	1.08	1.09	1.04	1.07	1.09	1.05	1.07	1.09	1.04	1.07	1.09
400.0	1.07	1.10	1.13	1.08	1.10	1.12	1.07	1.10	1.12	1.08	1.09	1.12
500.0	1.11	1.13	1.15	1.10	1.12	1.15	1.11	1.12	1.15	1.10	1.11	1.14
600.0	1.15	1.16	1.17	1.14	1.15	1.18	1.15	1.15	1.17	1.14	1.14	1.17
700.0	1.18	1.18	1.19	1.18	1.18	1.20	1.17	1.18	1.19	1.17	1.17	1.19
800.0	1.20	1.21	1.21	1.20	1.21	1.22	1.20	1.20	1.20	1.20	1.20	1.21
900.0	1.23	1.23	1.22	1.23	1.23	1.24	1.22	1.23	1.21	1.22	1.22	1.23
1000.0	1.24	1.25	1.23	1.25	1.26	1.25	1.24	1.25	1.23	1.24	1.24	1.24
1100.0	1.26	1.27	1.24	1.29	1.28	1.26	1.26	1.27	1.24	1.27	1.26	1.25
1200.0	1.28	1.29	1.25	1.32	1.31	1.27	1.28	1.28	1.24	1.31	1.29	1.26
1300.0	1.29	1.30	1.26	1.35	1.32	1.28	1.29	1.29	1.24	1.33	1.30	1.27
1400.0	1.32	1.31	1.27	1.38	1.34	1.28	1.31	1.30	1.25	1.37	1.32	1.27
1500.0	1.31	1.31	1.27	1.38	1.34	1.28	1.31	1.31	1.26	1.37	1.32	1.27
1600.0	1.31	1.31	1.28	1.39	1.34	1.28	1.31	1.31	1.26	1.38	1.32	1.27
1700.0	1.29	1.31	1.29	1.37	1.33	1.28	1.29	1.30	1.27	1.36	1.32	1.27
1800.0	1.28	1.30	1.29	1.35	1.32	1.27	1.28	1.29	1.27	1.35	1.31	1.27
1900.0	1.26	1.28	1.29	1.33	1.31	1.27	1.25	1.28	1.28	1.32	1.29	1.26
2000.0	1.24	1.26	1.28	1.30	1.28	1.27	1.23	1.26	1.27	1.28	1.27	1.25
2100.0	1.21	1.24	1.28	1.27	1.26	1.26	1.20	1.23	1.27	1.24	1.24	1.25
2200.0	1.18	1.21	1.27	1.24	1.22	1.25	1.17	1.21	1.26	1.20	1.21	1.24
2300.0	1.16	1.19	1.25	1.20	1.19	1.24	1.15	1.18	1.24	1.15	1.21	1.22
2400.0	1.13	1.16	1.22	1.17	1.15	1.23	1.12	1.15	1.22	1.09	1.21	1.21
2500.0	1.12	1.13	1.19	1.15	1.12	1.20	1.10	1.13	1.19	1.06	1.21	1.19
2600.0	1.09	1.10	1.16	1.13	1.09	1.17	1.07	1.10	1.16	1.06	1.21	1.17
2700.0	1.07	1.07	1.12	1.12	1.06	1.15	1.06	1.08	1.13	1.09	1.21	1.14
2800.0	1.06	1.05	1.09	1.12	1.04	1.11	1.04	1.06	1.10	1.11	1.21	1.11
2900.0	1.05	1.03	1.05	1.10	1.03	1.09	1.04	1.04	1.07	1.11	1.21	1.08
3000.0	1.05	1.02	1.02	1.09	1.04	1.07	1.04	1.03	1.04	1.11	1.05	1.05

RF FREQ (MHz)	VSWR (:1) @ VDD=+3V OVER TEMPERTURE (OFF STATE, ENABLE-HIGH*)					
	RF1			RF2		
	Control LOW*			Control HIGH*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	7.41	5.67	4.55	7.42	5.76	4.60
20.0	7.36	5.70	4.57	7.45	5.74	4.59
30.0	7.32	5.70	4.58	7.40	5.73	4.60
40.0	7.28	5.69	4.58	7.35	5.72	4.61
50.0	7.24	5.70	4.60	7.32	5.71	4.62
60.0	7.24	5.69	4.60	7.27	5.71	4.63
70.0	7.22	5.68	4.61	7.25	5.71	4.64
80.0	7.20	5.68	4.62	7.23	5.70	4.65
90.0	7.18	5.67	4.62	7.22	5.69	4.65
100.0	7.16	5.66	4.62	7.22	5.69	4.65
200.0	7.21	5.60	4.53	7.30	5.64	4.52
300.0	7.13	5.54	4.47	7.17	5.57	4.53
400.0	7.05	5.47	4.44	7.18	5.51	4.43
500.0	7.02	5.40	4.35	7.06	5.45	4.38
600.0	6.87	5.32	4.29	7.03	5.39	4.30
700.0	6.76	5.24	4.21	6.92	5.32	4.25
800.0	6.64	5.16	4.14	6.77	5.25	4.17
900.0	6.57	5.09	4.07	6.71	5.17	4.10
1000.0	6.47	5.02	4.02	6.65	5.10	4.03
1100.0	6.42	4.96	3.99	6.62	5.04	3.96
1200.0	6.36	4.90	3.96	6.53	4.97	3.90
1300.0	6.32	4.84	3.93	6.46	4.90	3.84
1400.0	6.24	4.78	3.89	6.37	4.84	3.79
1500.0	6.18	4.73	3.86	6.24	4.77	3.76
1600.0	6.17	4.70	3.84	6.16	4.72	3.73
1700.0	6.17	4.67	3.82	6.03	4.67	3.71
1800.0	6.17	4.65	3.80	5.97	4.63	3.69
1900.0	6.18	4.62	3.77	5.86	4.59	3.68
2000.0	6.24	4.63	3.76	5.79	4.57	3.69
2100.0	6.24	4.62	3.74	5.76	4.56	3.69
2200.0	6.30	4.63	3.73	5.74	4.56	3.69
2300.0	6.34	4.64	3.71	5.79	4.58	3.71
2400.0	6.34	4.66	3.70	5.92	4.61	3.70
2500.0	6.37	4.68	3.69	6.07	4.66	3.69
2600.0	6.41	4.71	3.69	6.25	4.71	3.68
2700.0	6.45	4.75	3.71	6.49	4.77	3.65
2800.0	6.47	4.80	3.74	6.69	4.84	3.64
2900.0	6.53	4.86	3.80	6.91	4.91	3.62
3000.0	6.53	4.91	3.87	7.06	4.99	3.61

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	INSERTION LOSS (dB) @ VDD=+2.3V OVER TEMPERTURE (ENABLE-HIGH*)					
	RF COM-RF1			RF COM-RF2		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	0.13	0.19	0.23	0.13	0.18	0.21
20.0	0.13	0.18	0.22	0.13	0.17	0.22
30.0	0.14	0.18	0.22	0.14	0.18	0.22
40.0	0.14	0.18	0.22	0.15	0.18	0.22
50.0	0.14	0.18	0.22	0.14	0.18	0.23
60.0	0.15	0.18	0.22	0.15	0.19	0.22
70.0	0.15	0.19	0.22	0.15	0.19	0.23
80.0	0.15	0.19	0.23	0.15	0.19	0.23
90.0	0.15	0.19	0.23	0.16	0.19	0.23
100.0	0.16	0.19	0.23	0.16	0.19	0.23
200.0	0.17	0.21	0.25	0.17	0.21	0.25
300.0	0.17	0.22	0.27	0.17	0.22	0.27
400.0	0.18	0.24	0.29	0.18	0.23	0.29
500.0	0.19	0.25	0.31	0.18	0.25	0.31
600.0	0.20	0.27	0.33	0.19	0.26	0.33
700.0	0.21	0.29	0.35	0.21	0.28	0.35
800.0	0.23	0.31	0.37	0.22	0.30	0.37
900.0	0.24	0.33	0.39	0.23	0.32	0.39
1000.0	0.25	0.35	0.41	0.25	0.34	0.41
1100.0	0.27	0.37	0.43	0.27	0.36	0.43
1200.0	0.28	0.39	0.45	0.29	0.39	0.45
1300.0	0.30	0.40	0.46	0.31	0.41	0.47
1400.0	0.32	0.42	0.48	0.34	0.43	0.49
1500.0	0.32	0.43	0.49	0.36	0.45	0.50
1600.0	0.33	0.45	0.51	0.37	0.46	0.52
1700.0	0.33	0.46	0.53	0.37	0.47	0.54
1800.0	0.33	0.47	0.55	0.37	0.48	0.56
1900.0	0.32	0.47	0.57	0.36	0.49	0.57
2000.0	0.32	0.47	0.58	0.34	0.48	0.58
2100.0	0.31	0.47	0.59	0.32	0.48	0.60
2200.0	0.30	0.47	0.60	0.31	0.47	0.61
2300.0	0.29	0.46	0.61	0.29	0.47	0.62
2400.0	0.28	0.46	0.61	0.28	0.46	0.62
2500.0	0.28	0.46	0.61	0.27	0.46	0.63
2600.0	0.27	0.45	0.61	0.28	0.45	0.63
2700.0	0.27	0.46	0.61	0.28	0.45	0.63
2800.0	0.28	0.46	0.61	0.28	0.46	0.63
2900.0	0.28	0.47	0.61	0.29	0.47	0.64
3000.0	0.28	0.47	0.62	0.29	0.47	0.64

RF FREQ (MHz)	ISOLATION (dB) @ VDD=+2.3V OVER TEMPERTURE (ENABLE-HIGH*)											
	RF COM-RF1			RF COM-RF2			RF1-RF2 Control LOW*			RF1-RF2 Control HIGH*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	63.92	62.51	61.31	62.16	59.65	60.43	57.01	59.09	58.12	59.62	58.29	59.79
20.0	77.71	90.77	74.32	70.02	77.94	70.33	80.20	77.39	88.31	71.70	74.23	78.79
30.0	90.67	73.03	76.96	74.44	74.67	70.18	78.41	74.98	78.42	74.30	74.50	73.26
40.0	74.11	70.41	68.57	71.57	72.34	68.02	77.04	75.52	79.28	73.39	77.67	72.12
50.0	64.04	64.07	60.94	60.92	68.29	60.62	66.91	61.24	65.41	61.89	64.03	63.89
60.0	63.62	62.70	62.47	65.15	63.99	65.89	72.79	71.61	72.23	70.76	76.11	67.57
70.0	67.71	64.73	63.73	65.24	66.99	63.78	71.26	70.00	72.39	69.85	74.27	66.67
80.0	65.68	63.88	62.64	63.92	65.80	62.54	71.20	67.61	71.24	68.68	73.14	65.71
90.0	64.34	62.58	61.42	62.52	65.01	61.83	70.72	66.74	70.75	67.27	71.77	64.80
100.0	63.32	61.69	60.74	62.08	63.77	60.61	69.96	65.87	70.25	66.61	70.26	63.54
200.0	57.72	56.11	54.79	56.20	57.61	54.84	63.24	60.31	63.15	60.48	63.13	58.04
300.0	54.13	52.73	51.19	52.70	54.07	51.29	60.09	56.78	59.88	56.71	59.39	54.63
400.0	51.44	49.99	48.75	50.10	51.59	48.78	57.01	54.50	56.98	54.29	56.76	52.27
500.0	49.54	48.03	46.77	48.24	49.53	46.84	54.90	52.41	54.74	52.19	54.62	50.19
600.0	47.81	46.38	45.19	46.55	48.03	45.29	53.24	50.82	52.93	50.53	52.73	48.63
700.0	46.38	45.06	43.87	45.28	46.53	43.95	51.79	49.56	51.46	49.12	51.42	47.28
800.0	45.19	43.81	42.70	44.08	45.40	42.77	50.52	48.22	50.12	47.75	49.88	46.08
900.0	44.03	42.76	41.60	42.99	44.32	41.73	49.35	47.20	48.88	46.68	48.79	44.99
1000.0	43.05	41.83	40.68	42.09	43.37	40.78	48.26	46.13	47.78	45.69	47.60	44.03
1100.0	42.11	40.91	39.86	41.20	42.47	39.94	47.34	45.26	46.77	44.80	46.61	43.14
1200.0	41.25	40.10	39.06	40.41	41.68	39.17	46.41	44.46	45.80	43.95	45.70	42.30
1300.0	40.47	39.33	38.35	39.67	40.87	38.43	45.57	43.61	44.91	43.11	44.80	41.52
1400.0	39.72	38.62	37.67	38.97	40.13	37.80	44.80	42.94	44.11	42.33	44.00	40.82
1500.0	39.06	37.96	37.06	38.31	39.39	37.13	43.96	42.22	43.29	41.66	43.18	40.12
1600.0	38.37	37.33	36.43	37.68	38.69	36.53	43.21	41.58	42.51	40.92	42.40	39.49
1700.0	37.76	36.74	35.87	37.09	37.99	35.96	42.42	40.94	41.70	40.28	41.69	38.85
1800.0	37.18	36.17	35.30	36.51	37.39	35.45	41.65	40.33	40.97	39.65	40.90	38.28
1900.0	36.66	35.67	34.80	35.99	36.75	34.97	40.91	39.69	40.21	39.03	40.16	37.70
2000.0	36.15	35.16	34.28	35.44	36.12	34.51	40.25	39.19	39.53	38.40	39.47	37.13
2100.0	35.68	34.65	33.79	34.97	35.59	34.07	39.46	38.56	38.79	37.78	38.70	36.61
2200.0	35.18	34.15	33.30	34.46	35.03	33.62	38.79	38.03	38.07	37.22	38.00	36.10
2300.0	34.74	33.77	33.30	34.03	34.55	33.21	38.23	37.48	37.47	36.69	37.40	35.68
2400.0	34.27	33.27	33.30	33.61	34.15	32.80	37.55	36.91	36.76	36.04	36.71	35.19
2500.0	33.80	32.85	33.30	33.17	33.79	32.40	37.03	36.44	36.12	35.51	36.06	34.72
2600.0	33.34	32.43	33.30	32.78	33.47	32.05	36.49	35.90	35.44	34.99	35.42	34.23
2700.0	32.81	32.01	33.30	32.41	33.15	31.66	36.00	35.41	34.83	34.41	34.81	33.80
2800.0	32.30	31.60	33.30	32.10	32.89	31.29	35.46	34.88	34.15	33.83	34.12	33.25
2900.0	31.75	31.20	33.30	31.76	32.56	30.90	34.96	34.40	33.59	33.31	33.56	32.78
3000.0	31.17	30.73	30.27	31.41	32.22	30.50	34.52	33.90	33.04	32.73	33.01	32.30

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	VSWR (:1) @ VDD=+2.3V OVER TEMPERTURE (ON STATE, ENABLE-HIGH*)											
	RF COM						RF1			RF2		
	Control HIGH*			Control LOW*			Control HIGH*			Control LOW*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	1.02	1.02	1.03	1.02	1.03	1.03	1.02	1.02	1.03	1.02	1.02	1.03
20.0	1.03	1.02	1.03	1.02	1.02	1.03	1.02	1.02	1.03	1.02	1.02	1.03
30.0	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03
40.0	1.04	1.02	1.03	1.04	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03
50.0	1.04	1.03	1.03	1.04	1.02	1.03	1.03	1.02	1.03	1.04	1.02	1.03
60.0	1.04	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
70.0	1.04	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
80.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
90.0	1.03	1.03	1.03	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04
100.0	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04
200.0	1.03	1.05	1.07	1.04	1.05	1.06	1.03	1.05	1.07	1.04	1.05	1.06
300.0	1.05	1.08	1.09	1.04	1.07	1.09	1.05	1.07	1.09	1.04	1.07	1.09
400.0	1.07	1.10	1.13	1.08	1.10	1.12	1.07	1.10	1.12	1.08	1.09	1.12
500.0	1.11	1.13	1.15	1.10	1.12	1.15	1.11	1.12	1.15	1.10	1.11	1.14
600.0	1.15	1.16	1.17	1.14	1.15	1.18	1.15	1.15	1.17	1.14	1.14	1.17
700.0	1.18	1.18	1.19	1.18	1.18	1.20	1.17	1.18	1.19	1.17	1.17	1.19
800.0	1.20	1.21	1.21	1.20	1.21	1.22	1.20	1.20	1.20	1.20	1.20	1.21
900.0	1.23	1.23	1.22	1.23	1.23	1.24	1.23	1.23	1.21	1.22	1.22	1.23
1000.0	1.24	1.25	1.23	1.25	1.26	1.25	1.24	1.25	1.23	1.24	1.24	1.24
1100.0	1.26	1.27	1.24	1.29	1.28	1.26	1.26	1.27	1.24	1.27	1.26	1.25
1200.0	1.28	1.29	1.25	1.32	1.31	1.27	1.28	1.28	1.24	1.31	1.29	1.26
1300.0	1.29	1.30	1.26	1.35	1.32	1.28	1.29	1.29	1.24	1.33	1.30	1.27
1400.0	1.32	1.31	1.27	1.38	1.34	1.28	1.31	1.30	1.25	1.37	1.32	1.27
1500.0	1.31	1.31	1.27	1.38	1.34	1.28	1.31	1.31	1.26	1.37	1.32	1.27
1600.0	1.31	1.31	1.28	1.39	1.34	1.28	1.31	1.31	1.26	1.38	1.32	1.27
1700.0	1.29	1.31	1.29	1.37	1.33	1.28	1.29	1.30	1.27	1.36	1.32	1.27
1800.0	1.28	1.30	1.29	1.35	1.32	1.27	1.28	1.29	1.27	1.35	1.31	1.27
1900.0	1.26	1.28	1.29	1.33	1.31	1.27	1.25	1.28	1.28	1.32	1.29	1.26
2000.0	1.24	1.26	1.28	1.30	1.28	1.27	1.23	1.26	1.27	1.28	1.27	1.25
2100.0	1.21	1.24	1.28	1.27	1.26	1.26	1.20	1.23	1.27	1.24	1.24	1.25
2200.0	1.18	1.21	1.27	1.24	1.22	1.25	1.17	1.21	1.26	1.20	1.21	1.24
2300.0	1.16	1.19	1.25	1.20	1.19	1.24	1.15	1.18	1.24	1.15	1.21	1.22
2400.0	1.13	1.16	1.22	1.17	1.15	1.23	1.12	1.15	1.22	1.09	1.21	1.21
2500.0	1.12	1.13	1.19	1.15	1.12	1.20	1.10	1.13	1.19	1.06	1.21	1.19
2600.0	1.09	1.10	1.16	1.13	1.09	1.17	1.07	1.10	1.16	1.06	1.21	1.17
2700.0	1.07	1.07	1.12	1.12	1.06	1.15	1.06	1.08	1.13	1.09	1.21	1.14
2800.0	1.06	1.05	1.09	1.12	1.04	1.11	1.04	1.06	1.10	1.11	1.21	1.11
2900.0	1.05	1.03	1.05	1.10	1.03	1.09	1.04	1.04	1.07	1.11	1.21	1.08
3000.0	1.05	1.02	1.02	1.09	1.04	1.07	1.04	1.02	1.04	1.11	1.05	1.05

RF FREQ (MHz)	VSWR (:1) @ VDD=+2.3V OVER TEMPERTURE (OFF STATE, ENABLE-HIGH*)					
	RF1			RF2		
	Control LOW*			Control HIGH*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	7.25	5.58	4.48	7.31	5.67	4.52
20.0	7.26	5.60	4.49	7.34	5.64	4.50
30.0	7.21	5.59	4.49	7.29	5.63	4.51
40.0	7.17	5.59	4.49	7.24	5.62	4.52
50.0	7.16	5.60	4.51	7.22	5.61	4.52
60.0	7.13	5.59	4.52	7.16	5.61	4.54
70.0	7.11	5.58	4.52	7.14	5.61	4.55
80.0	7.10	5.58	4.53	7.13	5.60	4.56
90.0	7.08	5.57	4.53	7.12	5.59	4.56
100.0	7.06	5.56	4.53	7.12	5.59	4.56
200.0	7.10	5.50	4.45	7.20	5.54	4.43
300.0	7.03	5.44	4.39	7.07	5.47	4.44
400.0	6.95	5.38	4.36	7.08	5.42	4.35
500.0	6.92	5.31	4.27	6.97	5.36	4.30
600.0	6.78	5.23	4.21	6.94	5.30	4.23
700.0	6.67	5.16	4.14	6.82	5.23	4.17
800.0	6.55	5.08	4.06	6.68	5.16	4.10
900.0	6.48	5.01	4.00	6.62	5.09	4.03
1000.0	6.38	4.94	3.95	6.56	5.02	3.96
1100.0	6.34	4.88	3.92	6.54	4.96	3.89
1200.0	6.27	4.82	3.89	6.44	4.89	3.83
1300.0	6.24	4.76	3.86	6.38	4.82	3.78
1400.0	6.15	4.70	3.82	6.29	4.76	3.73
1500.0	6.10	4.65	3.79	6.15	4.70	3.69
1600.0	6.08	4.62	3.77	6.07	4.65	3.67
1700.0	6.08	4.59	3.76	5.95	4.59	3.64
1800.0	6.08	4.57	3.73	5.89	4.55	3.62
1900.0	6.09	4.55	3.70	5.78	4.51	3.62
2000.0	6.15	4.55	3.69	5.71	4.49	3.62
2100.0	6.14	4.55	3.67	5.68	4.48	3.63
2200.0	6.21	4.56	3.66	5.66	4.48	3.63
2300.0	6.24	4.56	3.64	5.70	4.51	3.64
2400.0	6.25	4.58	3.63	5.83	4.53	3.64
2500.0	6.27	4.60	3.63	5.98	4.58	3.62
2600.0	6.32	4.63	3.62	6.16	4.63	3.61
2700.0	6.35	4.67	3.64	6.40	4.69	3.59
2800.0	6.37	4.72	3.68	6.60	4.76	3.57
2900.0	6.44	4.78	3.73	6.82	4.83	3.55
3000.0	6.44	4.83	3.80	6.97	4.91	3.55

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	INSERTION LOSS (dB) @ VDD=+4.8V OVER TEMPERTURE (ENABLE-HIGH*)					
	RF COM-RF1			RF COM-RF2		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	0.14	0.18	0.21	0.12	0.17	0.22
20.0	0.13	0.17	0.21	0.13	0.17	0.21
30.0	0.14	0.18	0.22	0.14	0.18	0.22
40.0	0.14	0.18	0.22	0.14	0.18	0.22
50.0	0.14	0.18	0.22	0.15	0.19	0.22
60.0	0.15	0.19	0.22	0.15	0.19	0.22
70.0	0.15	0.19	0.22	0.15	0.19	0.22
80.0	0.15	0.19	0.22	0.15	0.19	0.23
90.0	0.15	0.19	0.23	0.16	0.19	0.23
100.0	0.15	0.19	0.23	0.16	0.19	0.23
200.0	0.16	0.21	0.25	0.16	0.21	0.25
300.0	0.17	0.22	0.27	0.17	0.22	0.27
400.0	0.18	0.23	0.29	0.17	0.23	0.29
500.0	0.19	0.25	0.31	0.18	0.25	0.30
600.0	0.20	0.27	0.33	0.19	0.26	0.33
700.0	0.21	0.29	0.35	0.21	0.28	0.35
800.0	0.22	0.30	0.37	0.22	0.30	0.37
900.0	0.24	0.32	0.38	0.23	0.32	0.39
1000.0	0.25	0.34	0.40	0.24	0.34	0.41
1100.0	0.27	0.36	0.43	0.27	0.36	0.43
1200.0	0.28	0.38	0.44	0.29	0.38	0.45
1300.0	0.30	0.40	0.46	0.31	0.41	0.46
1400.0	0.32	0.42	0.47	0.34	0.43	0.48
1500.0	0.32	0.43	0.49	0.36	0.45	0.50
1600.0	0.33	0.44	0.51	0.37	0.46	0.52
1700.0	0.33	0.46	0.52	0.36	0.47	0.54
1800.0	0.33	0.46	0.54	0.36	0.48	0.55
1900.0	0.32	0.47	0.57	0.36	0.48	0.57
2000.0	0.31	0.47	0.58	0.34	0.48	0.58
2100.0	0.31	0.47	0.59	0.32	0.48	0.59
2200.0	0.29	0.46	0.60	0.31	0.47	0.61
2300.0	0.29	0.46	0.61	0.29	0.46	0.61
2400.0	0.28	0.46	0.61	0.28	0.46	0.62
2500.0	0.27	0.45	0.61	0.27	0.45	0.63
2600.0	0.27	0.45	0.61	0.27	0.45	0.63
2700.0	0.27	0.45	0.61	0.28	0.45	0.63
2800.0	0.28	0.46	0.61	0.28	0.46	0.63
2900.0	0.28	0.46	0.61	0.28	0.47	0.63
3000.0	0.28	0.47	0.62	0.28	0.47	0.64

RF FREQ (MHz)	ISOLATION (dB) @ VDD=+4.8V OVER TEMPERTURE (ENABLE-HIGH*)											
	RF COM-RF1			RF COM-RF2			RF1-RF2 Control LOW*			RF1-RF2 Control HIGH*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	66.98	63.05	56.28	59.77	60.13	59.52	60.57	59.53	58.29	56.98	58.51	59.86
20.0	75.91	74.10	71.40	72.92	72.35	80.61	75.69	78.07	74.23	78.01	77.67	73.69
30.0	83.86	74.42	71.75	71.57	76.57	71.25	76.44	76.33	74.50	74.46	77.84	71.78
40.0	73.75	71.85	69.10	70.98	72.12	69.01	78.84	74.14	77.67	76.98	74.33	72.53
50.0	62.52	61.24	64.29	66.62	61.61	64.62	63.12	66.60	64.03	65.16	65.52	60.62
60.0	64.56	66.53	70.33	62.40	65.04	61.16	73.11	70.01	76.11	69.26	77.21	68.62
70.0	67.40	65.34	63.77	64.60	67.20	63.35	72.97	68.61	74.27	69.05	72.20	67.91
80.0	65.91	64.07	62.90	64.46	65.93	62.98	71.21	68.53	73.14	68.47	72.53	66.23
90.0	65.01	63.57	62.15	62.93	65.07	61.72	69.37	67.13	71.77	66.92	72.34	64.96
100.0	63.42	62.53	61.41	62.48	63.58	60.95	68.74	67.11	70.26	65.83	72.40	64.07
200.0	57.78	56.26	54.90	56.11	57.81	54.94	63.31	60.76	63.13	60.51	63.41	58.72
300.0	54.20	52.66	51.33	52.78	54.03	51.50	59.94	57.17	59.39	56.91	60.03	54.91
400.0	51.53	50.05	48.89	50.19	51.66	48.87	57.28	54.51	56.76	54.43	56.86	52.37
500.0	49.62	48.20	46.90	48.25	49.71	46.96	55.20	52.64	54.62	52.31	54.70	50.44
600.0	47.96	46.55	45.34	46.65	48.11	45.43	53.57	51.15	52.73	50.66	53.08	48.80
700.0	46.49	45.16	43.97	45.30	46.72	44.05	52.09	49.58	51.42	49.27	51.55	47.47
800.0	45.26	43.97	42.79	44.12	45.50	42.91	50.58	48.42	49.88	48.05	50.16	46.22
900.0	44.13	42.90	41.73	43.11	44.40	41.87	49.51	47.27	48.79	46.87	48.88	45.17
1000.0	43.15	41.91	40.79	42.17	43.48	40.92	48.43	46.33	47.60	45.87	47.83	44.25
1100.0	42.20	40.97	39.96	41.31	42.57	40.09	47.48	45.34	46.61	44.91	46.76	43.30
1200.0	41.35	40.21	39.19	40.51	41.72	39.33	46.52	44.61	45.70	44.07	45.81	42.50
1300.0	40.55	39.46	38.46	39.77	40.96	38.54	45.72	43.81	44.80	43.23	44.95	41.68
1400.0	39.78	38.68	37.79	39.08	40.22	37.86	44.88	43.08	44.00	42.50	44.09	41.01
1500.0	39.12	38.06	37.16	38.41	39.48	37.26	44.08	42.40	43.18	41.74	43.30	40.27
1600.0	38.43	37.43	36.52	37.77	38.78	36.66	43.32	41.68	42.40	41.12	42.52	39.61
1700.0	37.86	36.83	35.99	37.16	38.08	36.09	42.52	41.08	41.69	40.42	41.73	38.99
1800.0	37.27	36.25	35.43	36.59	37.44	35.56	41.83	40.47	40.90	39.76	40.98	38.42
1900.0	36.76	35.73	34.91	36.07	36.82	35.07	41.03	39.83	40.16	39.13	40.21	37.83
2000.0	36.20	35.21	34.37	35.53	36.19	34.60	40.31	39.28	39.47	38.49	39.52	37.27
2100.0	35.73	34.75	33.88	35.07	35.69	34.18	39.55	38.64	38.70	37.85	38.78	36.73
2200.0	35.25	34.21	33.39	34.56	35.09	33.72	38.85	38.15	38.00	37.31	38.06	36.20
2300.0	34.80	33.84	33.39	34.13	34.62	33.31	38.30	37.58	37.40	36.74	37.48	35.76
2400.0	34.34	33.35	33.39	33.69	34.22	32.92	37.62	37.01	36.71	36.12	36.75	35.30
2500.0	33.85	32.91	33.39	33.24	33.85	32.49	37.09	36.54	36.06	35.58	36.12	34.82
2600.0	33.42	32.50	33.39	32.86	33.52	32.15	36.54	35.98	35.42	35.05	35.49	34.32
2700.0	32.88	32.06	33.39	32.48	33.20	31.73	36.04	35.49	34.81	34.47	34.86	33.87
2800.0	32.35	31.65	33.39	32.18	32.96	31.37	35.50	34.96	34.12	33.88	34.15	33.35
2900.0	31.78	31.27	33.39	31.83	32.63	30.97	35.02	34.48	33.56	33.35	33.58	32.87
3000.0	31.21	30.79	30.35	31.48	32.29	30.59	34.60	33.97	33.01	32.78	33.03	32.37

***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

ON - Low insertion loss state
OFF - Isolation state

Typical Performance Data

RF FREQ (MHz)	VSWR (:1) @ VDD=+4.8V OVER TEMPERTURE (ON STATE, ENABLE-HIGH*)											
	RF COM						RF1			RF2		
	Control HIGH*			Control LOW*			Control HIGH*			Control LOW*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	1.02	1.02	1.03	1.02	1.03	1.03	1.02	1.02	1.03	1.02	1.02	1.03
20.0	1.03	1.02	1.03	1.02	1.02	1.03	1.02	1.02	1.03	1.02	1.02	1.03
30.0	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03
40.0	1.04	1.02	1.03	1.04	1.02	1.03	1.03	1.02	1.03	1.03	1.02	1.03
50.0	1.04	1.03	1.03	1.04	1.02	1.03	1.03	1.02	1.03	1.04	1.02	1.03
60.0	1.04	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
70.0	1.04	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
80.0	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
90.0	1.03	1.03	1.03	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04
100.0	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04	1.02	1.03	1.04
200.0	1.03	1.05	1.07	1.04	1.05	1.06	1.03	1.05	1.07	1.04	1.05	1.06
300.0	1.05	1.08	1.09	1.04	1.07	1.09	1.05	1.07	1.09	1.04	1.07	1.09
400.0	1.07	1.10	1.13	1.08	1.10	1.12	1.07	1.10	1.12	1.08	1.09	1.12
500.0	1.11	1.13	1.15	1.10	1.12	1.15	1.11	1.12	1.15	1.10	1.11	1.14
600.0	1.15	1.16	1.17	1.14	1.15	1.18	1.15	1.15	1.17	1.14	1.14	1.17
700.0	1.18	1.18	1.19	1.18	1.18	1.20	1.17	1.18	1.19	1.17	1.17	1.19
800.0	1.20	1.21	1.21	1.20	1.21	1.22	1.20	1.20	1.20	1.20	1.20	1.21
900.0	1.23	1.23	1.22	1.23	1.23	1.24	1.23	1.23	1.21	1.22	1.22	1.23
1000.0	1.24	1.25	1.23	1.25	1.26	1.25	1.24	1.25	1.23	1.24	1.24	1.24
1100.0	1.26	1.27	1.24	1.29	1.28	1.26	1.26	1.27	1.24	1.27	1.26	1.25
1200.0	1.28	1.29	1.25	1.32	1.31	1.27	1.28	1.28	1.24	1.31	1.29	1.26
1300.0	1.29	1.30	1.26	1.35	1.32	1.28	1.29	1.29	1.24	1.33	1.30	1.27
1400.0	1.32	1.31	1.27	1.38	1.34	1.28	1.31	1.30	1.25	1.37	1.32	1.27
1500.0	1.31	1.31	1.27	1.38	1.34	1.28	1.31	1.31	1.26	1.37	1.32	1.27
1600.0	1.31	1.31	1.28	1.39	1.34	1.28	1.31	1.31	1.26	1.38	1.32	1.27
1700.0	1.29	1.31	1.29	1.37	1.33	1.28	1.29	1.30	1.27	1.36	1.32	1.27
1800.0	1.28	1.30	1.29	1.35	1.32	1.27	1.28	1.29	1.27	1.35	1.31	1.27
1900.0	1.26	1.28	1.29	1.33	1.31	1.27	1.25	1.28	1.28	1.32	1.29	1.26
2000.0	1.24	1.26	1.28	1.30	1.28	1.27	1.23	1.26	1.27	1.28	1.27	1.25
2100.0	1.21	1.24	1.28	1.27	1.26	1.26	1.20	1.23	1.27	1.24	1.24	1.25
2200.0	1.18	1.21	1.27	1.24	1.22	1.25	1.17	1.21	1.26	1.20	1.21	1.24
2300.0	1.16	1.19	1.25	1.20	1.19	1.24	1.15	1.18	1.24	1.15	1.21	1.22
2400.0	1.13	1.16	1.22	1.17	1.15	1.23	1.12	1.15	1.22	1.09	1.21	1.21
2500.0	1.12	1.13	1.19	1.15	1.12	1.20	1.10	1.13	1.19	1.06	1.21	1.19
2600.0	1.09	1.10	1.16	1.13	1.09	1.17	1.07	1.10	1.16	1.06	1.21	1.17
2700.0	1.07	1.07	1.12	1.12	1.06	1.15	1.06	1.08	1.13	1.09	1.21	1.14
2800.0	1.06	1.05	1.09	1.12	1.04	1.11	1.04	1.06	1.10	1.11	1.21	1.11
2900.0	1.05	1.03	1.05	1.10	1.03	1.09	1.04	1.04	1.07	1.11	1.21	1.08
3000.0	1.05	1.02	1.02	1.09	1.04	1.07	1.04	1.03	1.04	1.11	1.05	1.05

RF FREQ (MHz)	VSWR (:1) @ VDD=+4.8V OVER TEMPERTURE (OFF STATE, ENABLE-HIGH*)					
	RF1			RF2		
	Control LOW*			Control HIGH*		
	-45°C	+25°C	+85°C	-45°C	+25°C	+85°C
10.0	7.25	5.58	4.48	7.31	5.67	4.52
20.0	7.26	5.60	4.49	7.34	5.64	4.50
30.0	7.21	5.59	4.49	7.29	5.63	4.51
40.0	7.17	5.59	4.49	7.24	5.62	4.52
50.0	7.16	5.60	4.51	7.22	5.61	4.52
60.0	7.13	5.59	4.52	7.16	5.61	4.54
70.0	7.11	5.58	4.52	7.14	5.61	4.55
80.0	7.10	5.58	4.53	7.13	5.60	4.56
90.0	7.08	5.57	4.53	7.12	5.59	4.56
100.0	7.06	5.56	4.53	7.12	5.59	4.56
200.0	7.10	5.50	4.45	7.20	5.54	4.43
300.0	7.03	5.44	4.39	7.07	5.47	4.44
400.0	6.95	5.38	4.36	7.08	5.42	4.35
500.0	6.92	5.31	4.27	6.97	5.36	4.30
600.0	6.78	5.23	4.21	6.94	5.30	4.23
700.0	6.67	5.16	4.14	6.82	5.23	4.17
800.0	6.55	5.08	4.06	6.68	5.16	4.10
900.0	6.48	5.01	4.00	6.62	5.09	4.03
1000.0	6.38	4.94	3.95	6.56	5.02	3.96
1100.0	6.34	4.88	3.92	6.54	4.96	3.89
1200.0	6.27	4.82	3.89	6.44	4.89	3.83
1300.0	6.24	4.76	3.86	6.38	4.82	3.78
1400.0	6.15	4.70	3.82	6.29	4.76	3.73
1500.0	6.10	4.65	3.79	6.15	4.70	3.69
1600.0	6.08	4.62	3.77	6.07	4.65	3.67
1700.0	6.08	4.59	3.76	5.95	4.59	3.64
1800.0	6.08	4.57	3.73	5.89	4.55	3.62
1900.0	6.09	4.55	3.70	5.78	4.51	3.62
2000.0	6.15	4.55	3.69	5.71	4.49	3.62
2100.0	6.14	4.55	3.67	5.68	4.48	3.63
2200.0	6.21	4.56	3.66	5.66	4.48	3.63
2300.0	6.24	4.56	3.64	5.70	4.51	3.64
2400.0	6.25	4.58	3.63	5.83	4.53	3.64
2500.0	6.27	4.60	3.63	5.98	4.58	3.62
2600.0	6.32	4.63	3.62	6.16	4.63	3.61
2700.0	6.35	4.67	3.64	6.40	4.69	3.59
2800.0	6.37	4.72	3.68	6.60	4.76	3.57
2900.0	6.44	4.78	3.73	6.82	4.83	3.55
3000.0	6.50	4.91	3.88	7.09	5.00	3.62

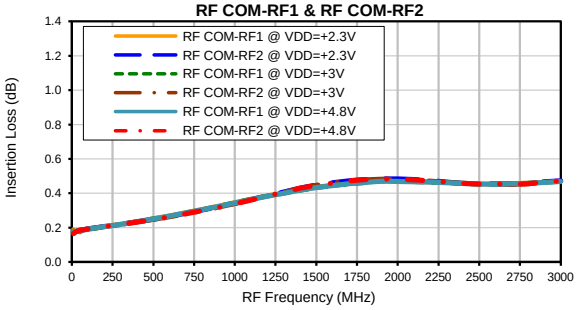
***Note:**

State of:		RF Common to	
Control Voltage	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

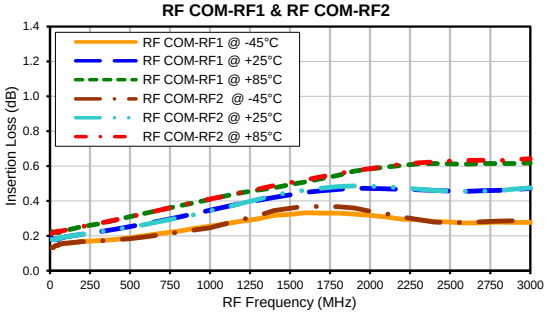
ON - Low insertion loss state
OFF - Isolation state

Typical Performance Curves

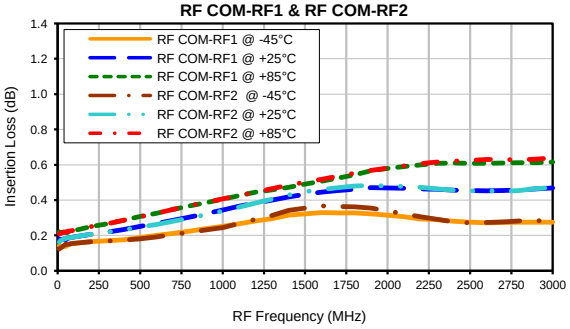
Insertion Loss vs. Frequency & VDD
RF COM-RF1 & RF COM-RF2



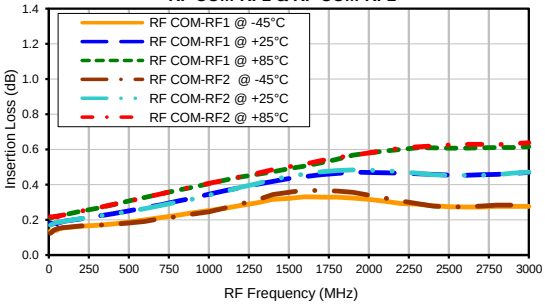
Insertion Loss vs. Frequency & Temperature
@ VDD=+2.3V
RF COM-RF1 & RF COM-RF2



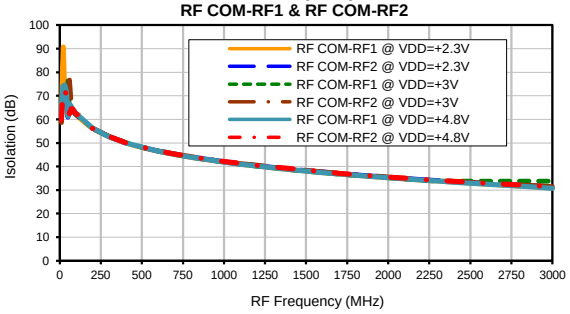
Insertion Loss vs. Frequency & Temperature
@ VDD=+3V
RF COM-RF1 & RF COM-RF2



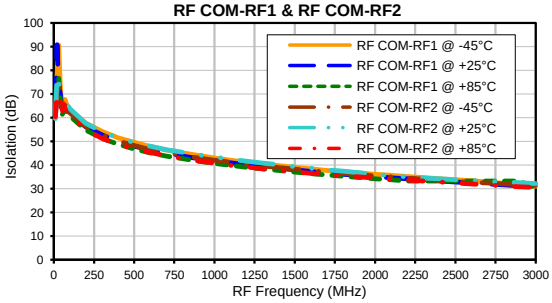
Insertion Loss vs. Frequency & Temperature
@ VDD=4.8V
RF COM-RF1 & RF COM-RF2



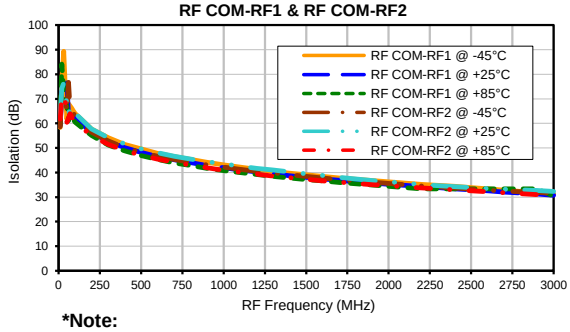
Isolation vs. Frequency & VDD
RF COM-RF1 & RF COM-RF2



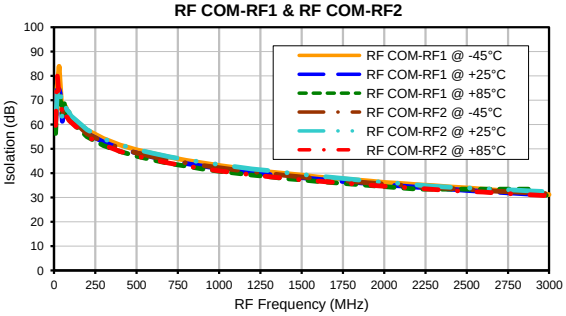
Isolation vs. Frequency & Temperature
@ VDD=+2.3V
RF COM-RF1 & RF COM-RF2



Isolation vs. Frequency & Temperature
@ VDD=+3V
RF COM-RF1 & RF COM-RF2



Isolation vs. Frequency & Temperature
@ VDD=+4.8V
RF COM-RF1 & RF COM-RF2

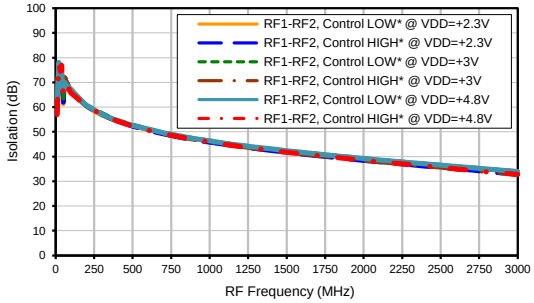


***Note:**

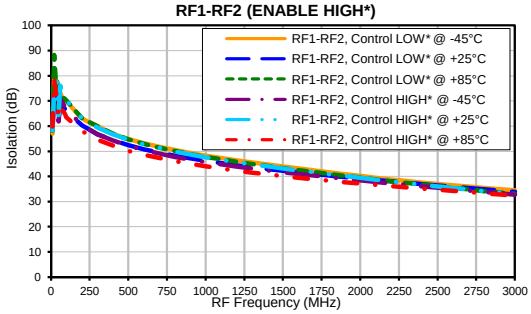
State of:		RF Common to	
Control Voltage	**Enable**	**RF1**	**RF2**
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	
ON - Low insertion loss state			
OFF - Isolation state			

Typical Performance Curves

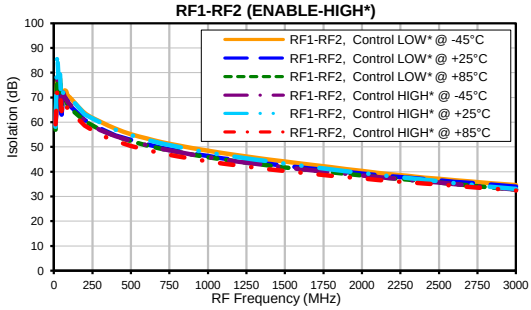
Isolation vs. Frequency & VDD
RF1-RF2 (ENABLE HIGH*)



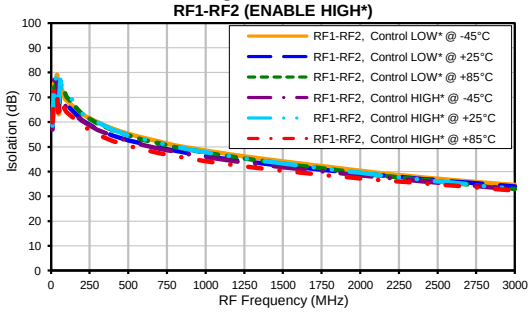
Isolation vs. Frequency & Temperature
@ VDD=+2.3V
RF1-RF2 (ENABLE HIGH*)



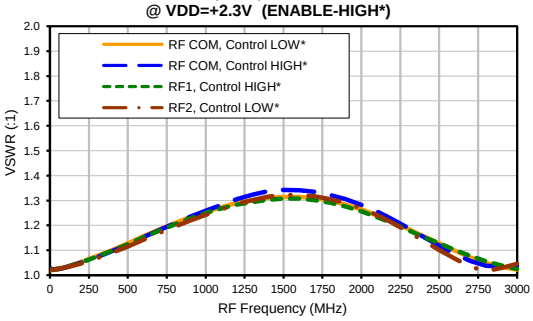
Isolation vs. Frequency & Temperature
@ VDD=+3.0V
RF1-RF2 (ENABLE-HIGH*)



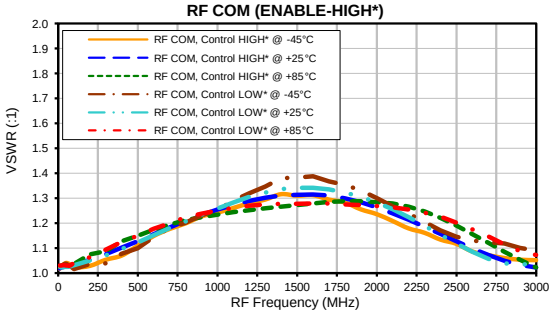
Isolation vs. Frequency & Temperature
@ VDD=+4.8V
RF1-RF2 (ENABLE HIGH*)



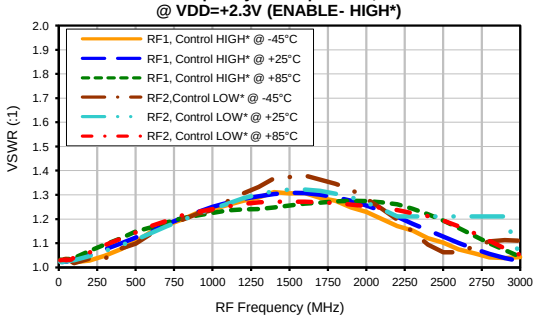
VSWR vs. Frequency; RF COM, RF1 & RF2
@ VDD=+2.3V (ENABLE-HIGH*)



VSWR vs. Frequency & Temperature; RF-COM
@ VDD=+2.3V
RF COM (ENABLE-HIGH*)



VSWR vs. Frequency & Temperature; RF1 & RF2
@ VDD=+2.3V (ENABLE- HIGH*)



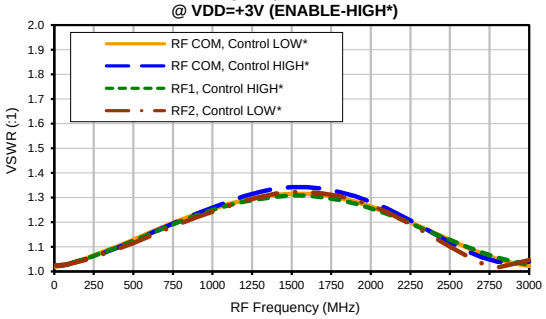
***Note:**

State of:		RF Common to	
Control Voltage	**Enable**	**RF1**	**RF2**
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	

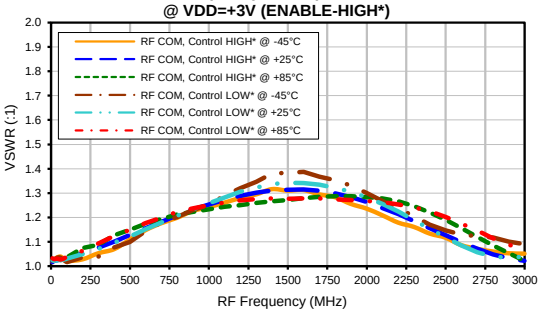
ON - Low insertion loss state
OFF - Isolation state

Typical Performance Curves

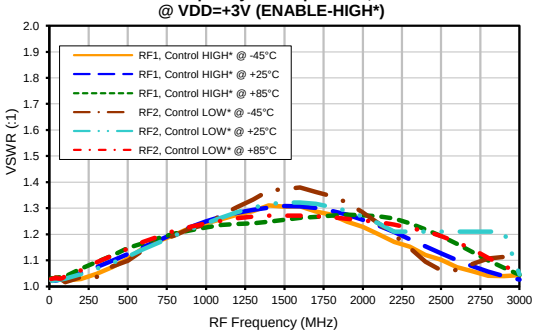
VSWR vs. Frequency; RF COM, RF1 & RF2 @ VDD=+3V (ENABLE-HIGH*)



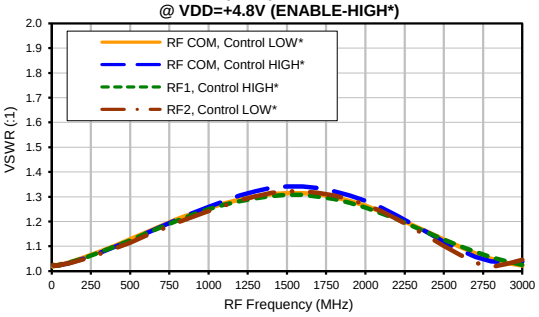
VSWR vs. Frequency & Temperature; RF COM @ VDD=+3V (ENABLE-HIGH*)



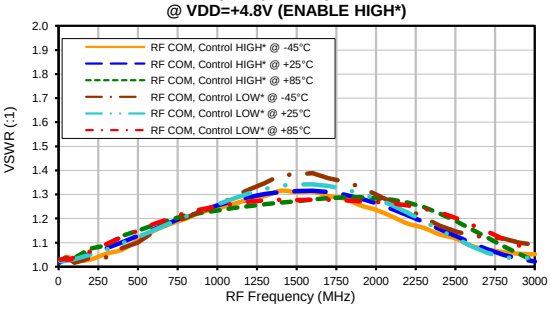
VSWR vs. Frequency & Temperature; RF1 & RF2 @ VDD=+3V (ENABLE-HIGH*)



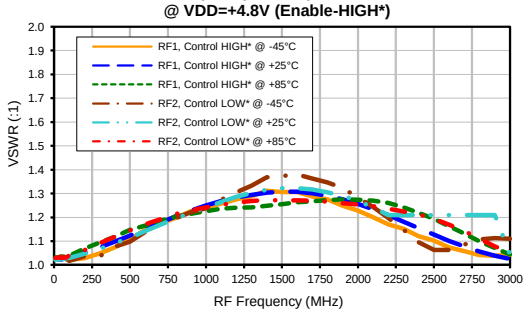
VSWR vs. Frequency; RF COM, RF1 & RF2 @ VDD=+4.8V (ENABLE-HIGH*)



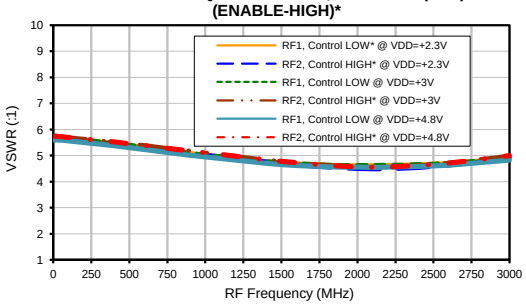
VSWR vs. Frequency & Temperature; RF COM @ VDD=+4.8V (ENABLE HIGH*)



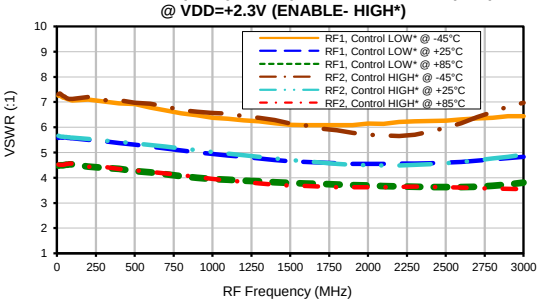
VSWR vs. Frequency & Temperature; RF1 & RF2 @ VDD=+4.8V (Enable-HIGH*)



VSWR vs. FREQUENCY & VDD; RF1 & RF2 (OFF) (ENABLE-HIGH)*



VSWR vs. Frequency & Temperature; RF1 & RF2 (OFF) @ VDD=+2.3V (ENABLE- HIGH*)

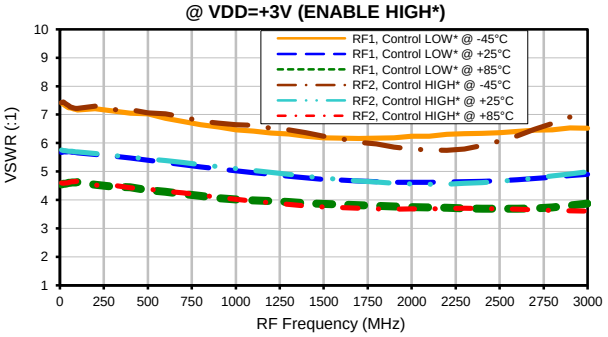


***Note:**

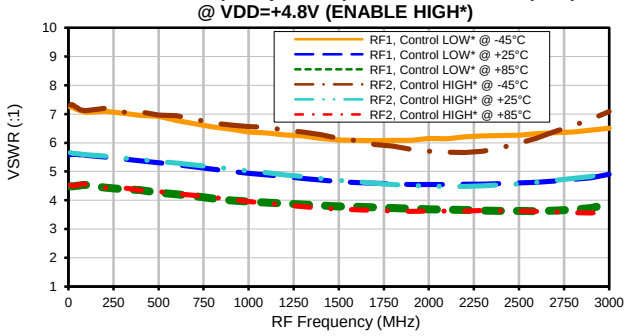
State of:		RF Common to	
HIGH	Enable	RF1	RF2
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	
ON - Low insertion loss state			
OFF - Isolation state			

Typical Performance Curves

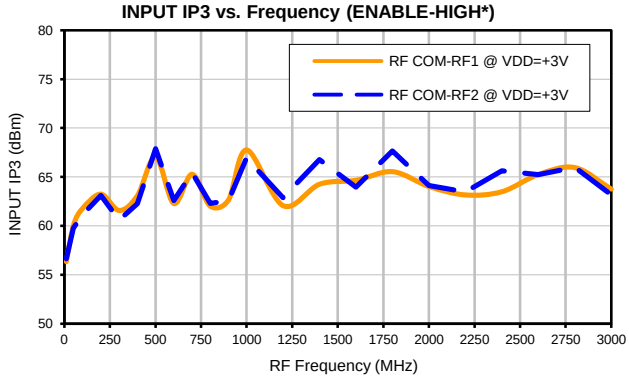
VSWR vs. Frequency & Temperature; RF1 & RF2 (OFF) @ VDD=+3V (ENABLE HIGH*)



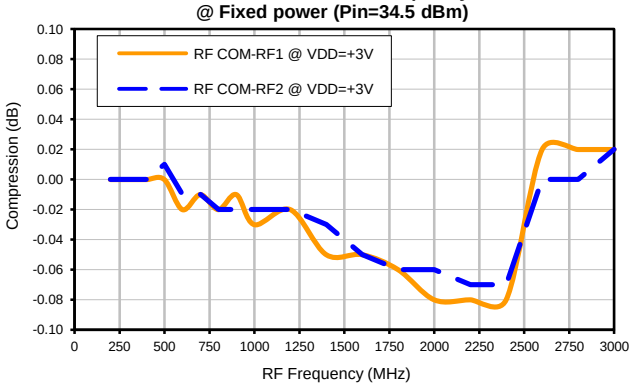
VSWR vs. Frequency & Temperature; RF1 & RF2 (OFF) @ VDD=+4.8V (ENABLE HIGH*)



INPUT IP3 vs. Frequency (ENABLE-HIGH*)



COMPRESSION vs. Frequency @ Fixed power (Pin=34.5 dBm)



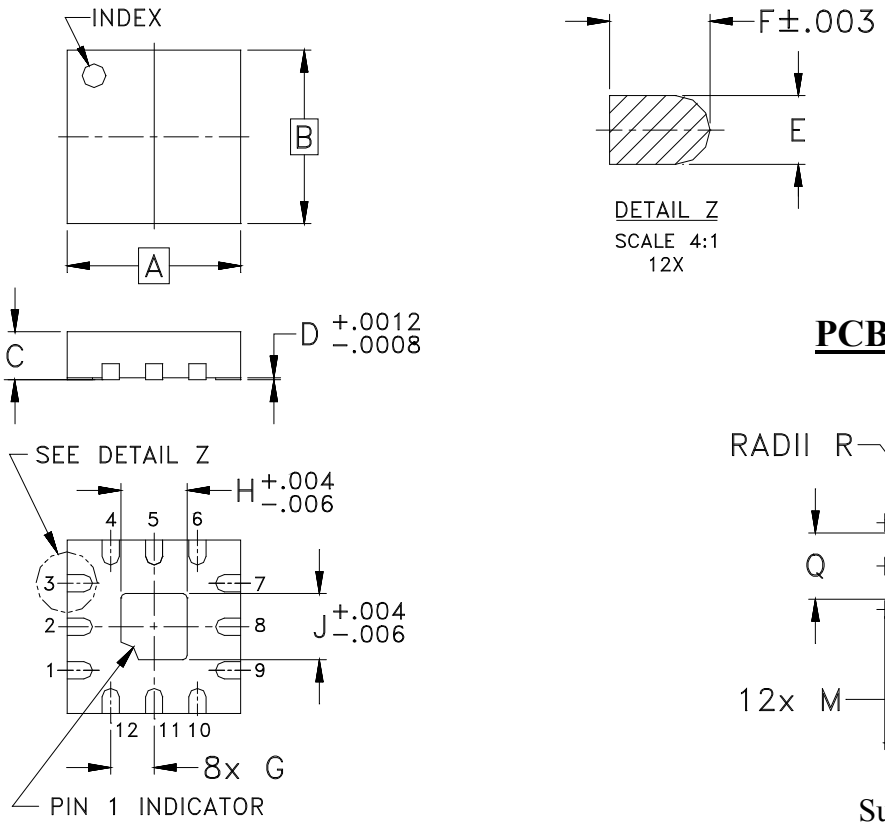
***Note:**

State of:		RF Common to	
Control Voltage	**Enable**	**RF1**	**RF2**
HIGH	HIGH	ON	OFF
LOW	HIGH	OFF	ON
LOW/HIGH	LOW	Shutdown	
ON - Low insertion loss state OFF - Isolation state			

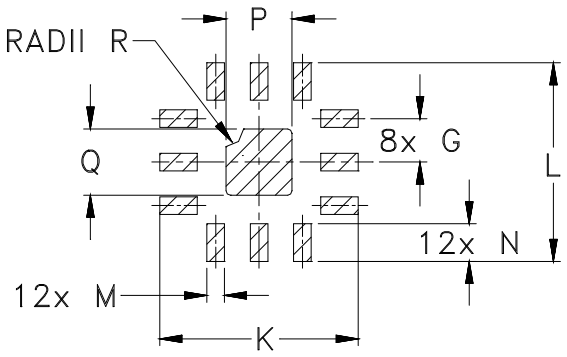
Case Style MT

MT1818

Outline Dimensions



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
MT1818	.079 (2.00)	.079 (2.00)	.022 (0.55)	.0008 (0.02)	.008 (0.20)	.011 (0.29)	.020 (0.50)	.030 (0.76)	.030 (0.76)	.090 (2.29)	.090 (2.29)	.008 (0.20)	.018 (0.44)

CASE#	P	Q	R	WT, GRAM
MT1818	.030 (0.76)	.030 (0.76)	.008 (0.20)	.010

Dimensions are in inches (mm). Tolerances: 3 Pl. ± .002

Notes:

1. Case material: Plastic.
2. Termination finish: Ni Pd Au.

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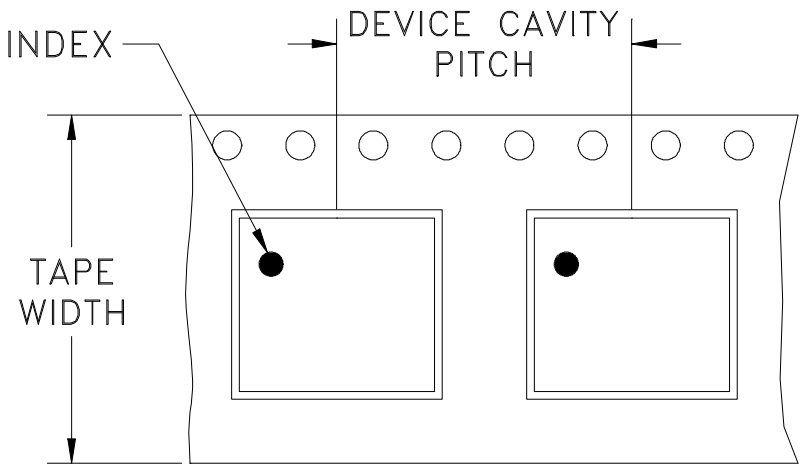
Mini-Circuits ISO 9001 & ISO 14001 Certified

Tape & Reel Packaging TR-F108

DEVICE ORIENTATION IN T&R



DIRECTION OF FEED

Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel	
12	4	7	Small quantity standards	20
				50
				100
				200
				500
				1000
		7	Standard	2000
				3000

Note: Please Consult individual data sheet to determine device per reel availability

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf

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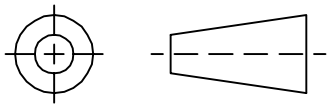
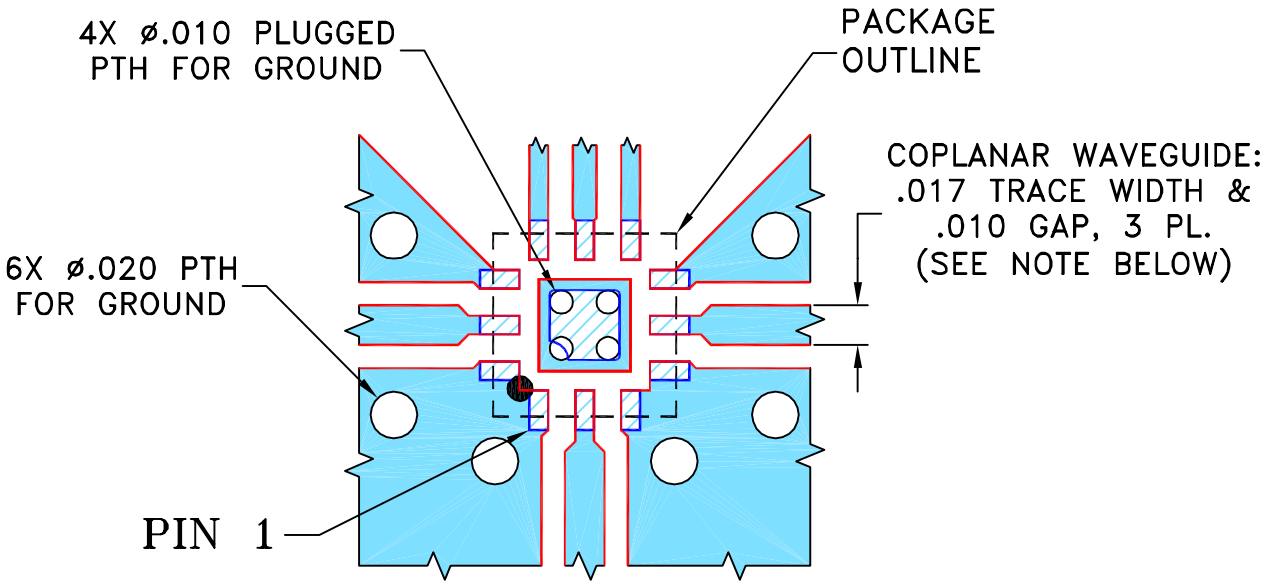
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M145643	NEW RELEASE	03/11/14	AV	RS

SUGGESTED MOUNTING CONFIGURATION FOR MT1818 CASE STYLE, "12SW01" PIN CODE



NOTES:

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER).

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

UNLESS OTHERWISE SPECIFIED		INITIALS	DATE
DIMENSIONS ARE IN INCHES	DRAWN	AV	03/11/14
TOLERANCES ON:	CHECKED	IL	03/11/14
2 PL DECIMALS ±	APPROVED	RS	03/11/14
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

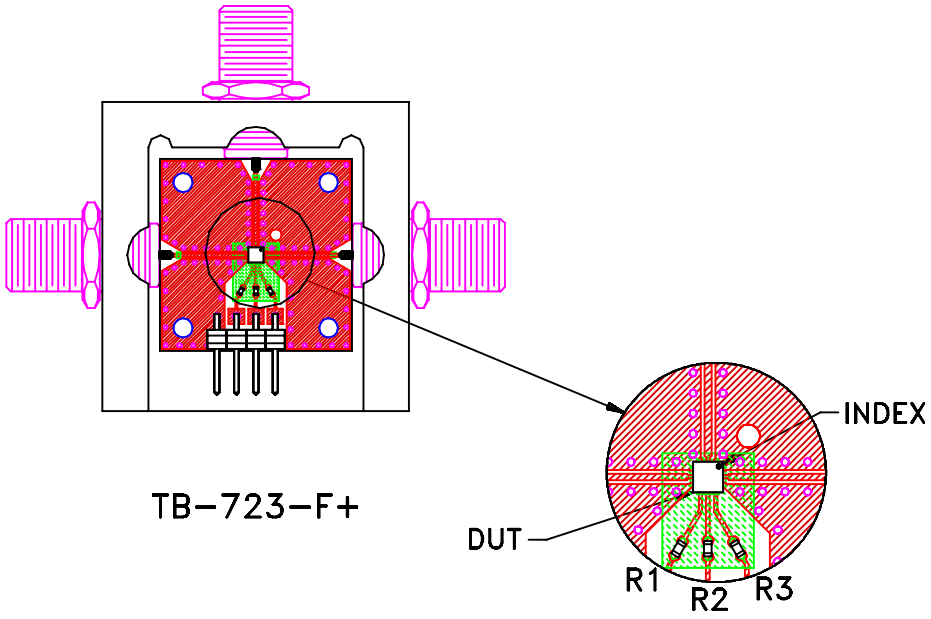
ASHEETA1.DWG REV:A DATE:01/12/95

Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

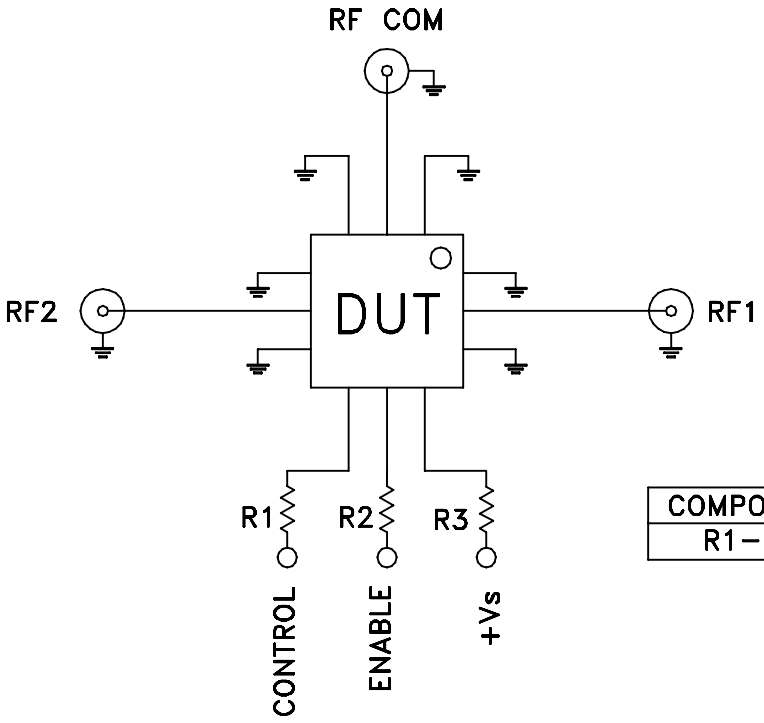
PL, 12SW01, 75, MT1818, TB-723-F+

SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-415	OR
FILE: 98PL415	SCALE: 12:1	SHEET: 1 OF 1	

Evaluation Board and Circuit



TB-723-F+



COMPONENT	VALUE	SIZE
R1-R3	1 kOhm	0402

Schematic Diagram

Notes:

1. 75 Ohm "F"-type Female connectors.
2. PCB Material: RO4350 or equivalent,
   Dielectric Constant=3.5, Thickness=.030 inch.

Mini-Circuits®

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Environmental Specifications ENV75

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-65° to 150° C / -40° to 125° C / -55° to 150° C Ambient Environment	Individual Model Data Sheet
Temperature Cycling	-65° to 150°C, 500 cycles	JESD22-A104, condition C
HAST	130°C, 85% RH, 33 PSIA, 96 hours, nominal bias	JESD22-A110
High Temp Storage	150°C 1000 hours	JESD22-A103
Solderability	Per Reference Spec	JESD22-B102
Moisture Sensitivity: Level 1	Bake at 125°C for 24 hours Soak at 85°C/85% RH for 168 hours, Reflow 3 cycles at 260°C peak	J-STD-020 D.01